SUPPLEMENT.

The Mining Journal,

RAILWAY AND COMMERCIAL GAZETTE:

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

No. 1928.—Vol. XLII.] LONDON, SATURDAY, AUGUST 3, 1872. {PRICE.....FIVEPENCE. PER ANNUM, BY POST, £1 4s.

Original Correspondence.

THE MINING DISTRICT OF SOUTH-WEST LANCASHIRE.

MESSRS. BLUNDELL'S NEW PITS, WIGAN.

[Visited by the Institution of Mechanical Engineers, on Thursday.]

The Pemberton Collieries, belonging to the Messrs. Blundell, are situate a very short distance from the Pemberton station on the Liverpool section of the Lancashire and Yorkshire Railway system, and about a mile and a half from the borough of Wigan; and the premises that have been constructed in connection with the new sinking pits, with which alone in this description it is proposed to deal, form without doubt the most striking feature in this portion of the busy mining district of South-West Lancashire. At these new works the first sod was cut on December 2nd, 1867, the object of sinking being to win the Wigan seams, the King coal and cannel seams, and the two Arley seams. The old Arley Mine pits, belonging to the concern, are about half a mile distant from the spot selected for the new operations, a fault intervening which throws the coal down about 500 yards. Two shafts have been sunk to a depth, in round numbers, of 640 yards—a downcast, known by the name of the Queen Pit, and an upcast, which has been called the King Pit. The downcast is 17 ft. 4 in. in diameter at the top, and 16 ft. at the bottom; the upcast is 19 ft. 4 in. at the top, and 18 ft. at the bottom, the difference in the diameter being for the purpose of admitting tubbing, in case the water from the Pemberton seams should at a future time become troublesome.

The time actually occupied in sinking was two years and a quarter; the total time that elapsed from the commencement to the completion of the shafts was two years and nine months, but fully six months were taken up by the driving of drifts in the various seams. The shafts were sunk by means of two pairs of horizontal engines, cylinder 16 in. diameter, stroke 3 ft.; and there is perhaps not another instance on record in which shafts have been sunk to such a depth with round ropes and with drums so small as were used in this case. The shafts are lined throughout with massive fireclay quarles, and the conductors are on a principle which has not previously been introduced into this district. Down each side of the shaft run pairs of railway metals, weighing 42 lbs. per yard, which are gripped by shoes fixed on the cages, very similar to ordinary chairs. One great advantage attending this arrangement is that the centre of the pit is left quite clear, while at the same time the work of winding is carried on with perfect safety. The cages each hold six tubs, are made entirely of steel, and weigh 28½ cwt. The tubs also are made of steel, weighing 3¾ cwt., and carry about 7½ cwt. of coal. The ropes are steel, and taper from 1⅝ in. to 1¼ in., and weigh about 3 tons.

The engine-house is a noble structure, 121 feet long, and in every respect is admirably adapted to its purpose. Only one of the enormous winding engines has been supplied by the eminent firm of Messrs. R. Daglish and Sons, of St. Helens, is at work. The two cylinders are each 36 inches in diameter, the stroke is 6 feet, the connecting rods are 16 feet 6 inches long, and the cranks (wrought-iron) 3 feet from centre to centre. The crank-shaft is also of wrought-iron, turned for the bearings, and it is 14 inches in diameter and 26 inches long, and to 15 inches diameter for the crank eye. The body of the shaft is octagonal in shape, and measures 18 inches across the faces. The foundation plates are 16 inches deep. There is a steam-brake attached, with cylinder 10 inches in diameter and a stroke of 3 feet; this is in addition to the ordinary foot brake. The winding drum is conical in form, with a maximum diameter of 30 feet 6 inches, and a minimum diameter of 19 feet, arranged for winding from a depth of 624 yards in 21 revolutions. The arrangements for this drum have evidently been very carefully considered. The centre line of the pulley is on the flat part of the top of the drum, and consequently there is not the slightest liability to the slipping of the rope; and, moreover, an additional protection is afforded by the coiling of the rope in a spiral groove. The pulleys are 18 feet in diameter, and have been supplied by Messrs. Baker and Valiant, of Wigan. The second winding-engine, which is being constructed by the Haigh Foundry Company, will be similar in construction to the one already described; there will, however, be a slight difference, owing to its having to wind from variable depths. The boilers for the new engines are eight in number, and are each 28 feet long. There are two flues—2 feet 10 inches in diameter. The boilers are fitted with four of Taylor's and Vicken's patent furnaces.

On the ground-floor of the engine-house a capstan-engine is placed, which can in a few moments be adapted to either shaft in case of emergency. For this purpose centre pulleys have been placed on the head gear; and when it is remembered that the centre of the shaft is always clear—there being no conducting rods there, as has already been explained—it will be seen that this could very readily be applied.

The heapstead that has been erected at the downcast-shaft is the first on so extensive a scale that has been fitted up in South Lancashire entirely of wrought and cast iron. The structure is extremely simple in design, and presents a very light and neat appearance. At first sight it might appear costly, but we are assured that the expense was not much more than double that of timber, and when it is considered that a structure of this kind will last for 90 or 100 years, the first cost must be looked upon as a mere trifle compared with the constantly recurring outlay involved by the use of timber, which must be renewed about every 15 years. A very novel arrangement has been adopted here by Mr. Watkin, the manager, for screening the smaller qualities of coal. After the round has passed the ordinary screen the remainder falls through an iron hopper into a long cylinder, containing an 18-in. worm, by means of which the coal is carried into a kind of well, whence it is mechanically lifted into what is known as the apparatus-house. There it passes through revolving screens, and is discharged into wagons in its various qualities. The whole of the fittings of the heapstead are of the most modern description. The cages are furnished with a disengaging apparatus, and there is a speaking-tube from the heapstead to the engine-house, to be used in foggy weather or in cases of emergency.

In consequence of the great increase in the price of iron it has been found desirable to combine stone and iron in the construction of the heapstead over the upcast-shaft, which is now being erected. The design is novel, and care has been taken to make it correspond as nearly as possible with the style of the one erected at the other shaft.

The chief attraction of the place to mechanical and mining engineers has been left to conclude the description. It is a very large Guibal fan, used for the purpose of ventilating the mines, instead of the usual furnaces, against which so much has been urged on the ground of their uncertainty, and of the nuisance they create. The fan is believed to be the largest yet made; it is constructed entirely of steel, is 46 ft. in diameter, and 15 ft. in width. The length of the shaft, which is a magnificent forging, is 19 ft. 3 in., and its diameter in the centre 16¼ in., and at the pedestal end 12 in. At the crank end the bearings are 18 in. long. There are two cylinders, 36 in. in diameter, with a stroke of 3 ft. 6 in.; Cornish valves and slide-blocks made adjustable by means of taper-wedges, screws, and lock-nuts. The foundation-plates are 16 in. deep. One of the cylinders is sufficient to drive the fan, and, in fact, only one is in operation, but the other can be applied in a very few minutes, and without interfering, to any perceptible extent, with the ventilation. The main pedestal is of a very novel and effective character, and reduces the time occupied in replacing the brass steps to a minimum. The shaft is covered over at the top with a scaffold, on which are two large doors, and the air enters the fan by means of a large culvert. At the top of the drift, beneath the fan and the shaft, there is what is called an escape-chimney, provided with four large doors, so that in case of an explosion the blast would pass through these doors, and then under the pit-scaffold without injuring the fan. The fan is calculated to produce, at 50 revolutions and 3¾ in. water-gauge, 230,000 cubic feet of air per minute; and by increasing the speed to 60 revolutions the ventilation would be increased to 250,000 cubic feet per minute. The first-named quantity is, however, considered an ample supply under all circumstances. The fan-engine was supplied by Messrs. Baker and Valiant, of Wigan, and the fan itself by the Stavely Iron Company, Sheffield.

The whole of the works have been carried out under the direction of Mr. W. J. L. Watkin, who for the last seven years has been manager for the firm, and who, in these undertakings, has been assisted by Mr. James Burrows, of Wigan, the well-known mechanical engineer. The under-viewer is Mr. J. Clarke, and the resident mechanical engineer Mr. J. House; and there could not be a better proof of their efficiency and of the care that has been taken than is to be found in the fact that during the whole of the time occupied in the work only one accident, which was wholly beyond the control of the management, has happened.

THE COAL-OIL INDUSTRY OF SCOTLAND—No. I.

The coal-oil industry of Scotland, although it has been somewhat depressed since the war on the Continent, is one of the most important, and is well deserving of more than the passing notices which occasionally appear in the newspapers. We all remember the time when to a greater or less extent heavy fatty oils were used for burning in lamps; for although coal-gas at the beginning of this century was introduced by Mr. Murdoch, of Soho, few towns adopted it till a considerable time after, owing to the great expense necessary for the construction of gasworks, and the carrying of pipes through the streets and into houses. Most of the gas light in the different towns has been supplied by joint-stock companies, and although the most of them have paid well and proved profitable concerns, it was with difficulty that capitalists could be got at first to embark in them, until public confidence was established regarding the result. Paraffin oil was the first great improvement in the matter of giving light to houses after the many centuries in which the people of all the countries of the world had used heavy fatty oils, rush lights, or tallow candles for that purpose. Its cheapness and applicability placed it within the reach of all: hence the reason why it was so much used in the houses of the poorer classes, even in towns where gas had been introduced, and why it is used in all country and outlying places of the present day. It is next to gas in illuminating power, and so well does it serve its purpose that gas companies have had a struggle in competing with it for the monopoly of lighting up the world. Were it not for its sharp, although wholesome, odour, and the trouble attending it with the lamps in which it is burned, it would be used more widely than it is even at present. It is the cheapest of all light now; and the upper classes, and those who have much gilding ornamenting their rooms, find that burning it, in proper lamps, does not injure gilding to anything like the same extent which gas does. It is now being produced so white, limpid, and sweet in smell, as to be rather pleasant to handle than otherwise. The lamps, too, can be had in very ornamental designs, giving great light, and so arranged that there is little or no risk of accidents from them. It is our belief that paraffin oil will again come to be more widely used by the middle and upper classes, and that there is a better future for the manufacturer of the article than there has been during the past ten years.

Looking at the matter in this way, there is a good deal of romance about it. We are quite flooded with light now. Gas light, paraffin light, petroleum light, not to speak of the electric light and lime light, or that which has been thrown over the realm of mind to such an overwhelming extent. The cry of Goethe for "Light, still more light," is being realised to a greater extent than he imagined. And it has all come about in our day. The present generation are the peculiar people which have been blessed with the first dawn of light. We must be highly favoured indeed.

But to come closer to the practical part of the subject which we intend to follow out in a short series of articles under the above heading. We find that Prof. Liebig, just before this dawn of light, gave utterance to the following words, which we may take as a sort of text:—"It would certainly be esteemed one of the greatest discoveries of the age if anyone could succeed in condensing coal gas into a white, dry, solid, colourless substance, portable, and capable of being placed upon a candlestick, or burnt in a lamp." Liebig probably little thought how soon this would be more than realised, and that not only would the white, dry, portable substance Paraffin be produced and burnt in candlesticks, but that the further results of the condensation of coal gas would become an article of commerce.

Before taking up the industry as it is now in Scotland and Wales we think it is necessary to sketch rapidly the history of its progress to the present time. Enquiries into the matter have been going on during the last century and a half, or more, but the progress made was small up to the year 1850. The earliest of these attempts were principally with a view to get tar or pitch from coal, with the intention of using it as Norwegian or Archangel tar is used, for tarring ships and ropes. The only one of these attempts that assumed the position of a manufacture was that of Lord Dundonald, who from the distillation of coal produced coke and tar. The manufacture appears to have succeeded till some time after the introduction of gas lighting, when the tar from the gasworks was thrown upon the market in considerable quantities, and extinguished the works first erected by Lord Dundonald. From the time when Hancock and Portlock, in 1694, made "pitch tar and oyls" of a kind of stone, various persons, experts, made investigations in coal and shale oils, Selligue, in France, was the first who succeeded in purifying the tars in some degree, and to manufacture an oil from shale on a large scale, and introduced it for lighting. He began his experiments as early as 1834, erecting three factories. In the six years from 1838 to 1843 he sent out about 15,000 barrels of shale oil. His oils obtained an extensive sale in Europe, both for burning in lamps and for lubricating purposes. Still the industry did not extend. Mr. Abraham Gesner, a doctor of medicine in Prince Edward's Island, claimed to be the first who was successful in the attempt to manufacture paraffin oils from coal, both for burning and lubricating purposes. This was in 1846, when he obtained patents for his improvements, which he sold to the North American and New York Kerosene Light Company. Several parties have since obtained patents for alleged improvements, but from the modifications of the manufacture apparently laid down, they contain but little that is new in principle.

In 1847 a patent was granted to Charles Mansfield for "an improvement in the manufacture and purification of spirituous substances, and applicable to the purposes of artificial light." His operations were chiefly directed to the coal tar and gas works, from which he obtained benzole. He was, perhaps, the first to introduce the benzole or atmospheric light, which is described at length in his specification.

The industry made considerable progress in the United States and Germany, where the oil was principally made from the Boghead coal, brought from Scotland, or the bituminous shales which were found in that country. In the States Luther Atwood experimented on this class of oils as early as 1850, and succeeded in perfecting his "Coup oil," made from coal tar. This was manufactured as a lubricating oil in considerable quantities by Samuel Downer, of Boston, In 1855, or 1856, the Breckenridge coal of Kentucky was used for making oil. Trinidad pitch, chapapote from Cuba, candle tar, and various other materials were used, but it was found to be more economical to import Boghead coal from Scotland than to use the other materials. The only exception is the Albertite mineral of Nova Scotia, which yielded as good, if not better, than the Boghead coal. But the Albertite was monopolised by a single company. In January, 1860, there were as many as 40 coal-oilfactories on the Atlantic border, all of which used the Boghead coal, with the exception of two, where the Albertite was the material used. The discovery of the oil wells, in the same year, put an end almost to this industry in America.

In October, 1850, James Young, of Bathgate, Scotland, previously of Manchester, took out his patent "for the obtaining of paraffin oil, and an oil containing paraffin, from bituminous coal," since which time, as is well known, the industry has rapidly extended, and is now classed among the leading ones of the country.

THE HOLMES COLLIERY, MASBRO'.

Sir,—In the Supplement to last week's Journal you publish a very excellent paper on the Holmes Colliery, in which the credit is given to me of putting down the underground force pumping apparatus. It should also have done so as to the winding-engine, which I reconstructed. The air furnace, which I made from beginning to end. The underground air machinery, which I planned and put into work, and which was the most extensive in the world when put down in 1870. It is now exceeded by only *one*—Ryehope Colliery, Durham. Each of these for effective utility are not surpassed in the world.—*Thornley Colliery, July* 31. P. Cooper.

ORE-DRESSING MACHINERY.

Sir,—On Nov. 19, 1870, a drawing came out in the Supplement to the *Mining Journal*, called "Ore-Dressing Machinery;" ever since that time I have been expecting to see that machinery completed, but as yet I have not met with anything, I believe, from the same person.

Now, sir, my reason for writing to you on this subject is to know what difference there is in that machinery and in that I wrote to you about 14 years ago? It is true they use a "trommel" instead of the second "grate." As I then stated to you, this trommel is nothing new to me, as I put it up in Sardinia in 1866, and worked it to the great advantage of the company; so much so, that my dressing cost, on the Gonaza dressing-floors was only 8s. 4d. per ton, worth 75 per cent. for lead. Now, Sir, what I want is to see this kind of machinery completed, which, I am sure, when done, will save thousands yearly to the lead mining companies of Europe.

There is one trommel more wanted, and last of all, the round buddle, to complete this mode of dressing "shaft-smalls" and "rough." Now, sir, it may be said by some, this plan may do for the "shaft-smalls," but what is to be done with the "buck," or "crushed work?" Precisely the same. A stream of water should be brought under the crusher sieve; by this water, all the crushed staff should be taken on in launders to the jigging hutches. If the crusher sieve be a 4-hole one, here a 6-hole trommel should be fixed to take out the first-class jigging stuff. What passes through the mesh of this trommel should be taken direct to the round buddle; but before entering it it should pass through another zinc trommel, so as to take out all the rough-grain lead. A cistern should be placed by the side to receive the fine before going into the buddle. This cistern must be made diagonal at side and back, front upright, so as to throw all the stuff at one corner. At this corner a hatch should be placed to regulate the buddle. On the top of the cistern a small launder should be put, to take off part of the water, as there will be more than the buddle will require. This water should be taken into a large cistern, or pit, pre-

pared for that purpose, as what passes off in it will be found very valuable, and easily prepared for the market.

In closing my remarks on this subject for the present, I would say that any unprejudiced or practical man must see that it is impossible that any ore can be lost, as the last process is the round buddle, the water of which, when leaving, is almost still. After nearly 40 years' experience, I cannot see a more economical plan for dressing silver-lead ores—to be had without patent or fee.

St. Teath, July 4. WILLIAM BETTESS.

THE SLATE DISTRICTS OF NORTH WALES.

SIR,—In the *Mining Journal*, of July 27, is a paragraph announcing the discovery of a new slate district in North Wales, "belonging to the Cambrian series, lying to the west of the Corris quarries, and immediately north of the River Dovey." As a matter of scientific interest, may I ask your correspondent the name of the place where Cambrian rocks are to be found in the neighbourhood referred to? In the Geological Survey of North Wales none are mentioned south of the Mawddach, and my own more limited observation confirms this opinion. The country rocks generally, in the district mentioned, belong to the Bala strata, one of the highest members of the Lower Silurian series; and although I will not deny the *possibility* of a small patch of Cambrian rock being found in this situation, I doubt very much the *probability* of such a phenomenon.

The rocks throughout this part of the country are principally, more or less, sandy slates and sandstones, the former with indifferent cleavage, and frequently very much contorted. With regard to the "probability of an important addition to the slate-producing areas of North Wales being made by the development" of these rocks, many quarries have been opened in the most promising portion of them—that immediately to the south of Cader Idris, some of which are still working; but whether the slate merchants consider their produce "an important addition" to that of the old-established districts in Carnarvonshire and Festiniog, or the shareholders look upon them as good and safe investments, are questions that probably each would answer in the negative.—*July 31.* G.

NEW ROSEWARNE.

SIR,—Permit me to correct an error of the printer in my letter of last week. One pair of stamps, it was stated, would return 16 tons of tin per month, and two pair 32, &c., but for *two* it is printed *the*.

I may take this opportunity, also, for saying that in confirmation of the agents' statement, that the ore may be estimated at 25,000*l.* to 30,000*l.*, I have been favoured with copies of the reports of two independent agents who inspected the mines for shareholders some months ago.

Capt. Edward Rogers, of the Great Western Tin Mines, reported, "I would remark, in conclusion, that I was greatly surprised to see such *a rich lode standing by the side of the different levels*, and not cut through for a great many fathoms in length, and, from every appearance, it is very large; therefore it is plain that there are *hundreds of fathoms* of ground *already discovered* that can be taken away at a *large profit*." Again, about the end of May, Capt. James Rowe inspected for another shareholder, and reported, "There are tens of thousands of tons of good tinstuff already laid open for stoping *at and above* the 67 fathom level;" and he added, "I cannot but come to the conclusion that there is an immense quantity of tin already discovered *from* the 67 *to the bottom of the mine.*" ARGUS.

NEW ROSEWARNE.

SIR,—Shareholders in this mine, who, like myself, reside at a distance, and are, therefore, somewhat at a disadvantage, will, I am sure, join with me in thanking "ARGUS" for his valuable and informing letter which appears in the Supplement to last week's Journal. I have always had great confidence in the mine; but it is pleasant to find so painstaking a correspondent giving the result of his investigation, and more than confirming previous opinions. I hope "Argus" will not think I am trespassing by asking him to give us such information as he may possess respecting New West Rosewarne, Rosewarne United, and Rose United. Cornwall people, I understand, think highly of all these mines, and being upon the spot, they have the means of obtaining information which those at a distance do not possess. I hope "Argus" will comply, and that we shall see his report in your valuable Journal.

Birkenhead, July 29. INQUIRER.

MOUNT DALBY MINES.

SIR,—Observing in last week's Journal that a report, or rather monthly reports, of the proceedings at these works are asked for by a shareholder, permit us to state that up to Saturday last the workings have been of so varied a character that nothing could be said only what has previously been laid before each shareholder, either through your valuable Journal or by private communication. But, in deference to the wishes of your correspondent and others, the managing director (Mr. C. Dutton) will in future forward, through us or the Secretary of the company, a monthly report to the Journal.

We may here state that upon the first cutting of the celebrated Beckwith silver-lead lode it was thought by competent engineers that, from the peculiar nature of the ground, ore could be reached by an adit level driven into the side of the mountain and across the lode, which runs almost due east and west. Two adit levels of some extent were thus driven at different altitudes, and in these drivings it was found that at a short distance therefrom an excellent lode, running about north by north-east, and south by south-west, formed a junction with the principal lode—hence another adit was driven at an angle to where this junction took place. But it was proved that, although some nice silver-lead ore was met with, still the adits were not deep enough to grasp the ore-bearing ground; and, as these several adits were on a level with the river or brook, it was not advisable to sink lower without the aid of a small shaft.

At a meeting of directors held in June it was decided, on the advice of an eminent mining engineer and Mr. Dutton (the managing director), that two small shafts should be at once sunk, one on the course of the principal lode, and the other a short distance lower down the mountain, from which cross-cuts could be driven in different directions into the lodes thus discovered. These shafts, after immense labour, are now completed, and on Monday last the men commenced cross-cutting the different lodes. Mr. Dutton, writing us on the 29th inst., says—"Our top shaft is sunk 7 fms. in No. 3 adit level, and placed between the north and south and east lodes; the sinking from first to last has yielded some beautiful specimens of silver-lead ore. We shall now drive westward, in order to intercept the two north and south lodes. Our lower shaft, which is placed some 120 yards down the mountain, and on the south side of the celebrated Beckwith lode, has also produced excellent specimens of silver-lead ore during sinking operations. We are now driving eastward on the course of the lode, which is like an elongated figure 8, the junction lying between the two shafts; in short, we have so many good points at hand that excellent results cannot possibly fail us, and in my next report you may fully expect most agreeable information."

We shall always be most happy to give shareholders or non-shareholders any information they may require respecting this splendid undertaking.

88, Portland-street, Manchester, July 31. GROSVENOR AND CO.

WHEAL BRITAIN.

SIR,—This mine, when it was formerly worked, about 50 years ago, was known by the name of "Wheal Concord." The present name is new, having been very recently given to the property by Mr. Joel Phillips, the lessee under the lords of the manor of Goonearl, who are five or six in number. They are the owners of all the minerals except tin, which is the property of the Duke of Cornwall and the lords of Tywarnhaile Tyas, in undivided moieties. It is unfortunate for this company that they have no right to the tin, which is the principal ore in the sett, for a licence for that was granted to Captain Richard Pryor about two years ago, and since renewed. Of this fact Mr. Phillips was unaware till recently. He has been working under a supposition that the lords of the manor had leased to him *all* minerals, and when Captain Pryor showed him his title to the tin he would not be convinced, and, I hear, he still refuses to admit it, or to treat for terms of arrangement. Of course he will be compelled, if necessary, to account to Capt. Pryor for all tin sold, or that may be sold, from the limits. Capt. Pryor's grant is co-extensive with the sett worked a few years ago under the name of "Scorrier Consols," which comprises all the shafts and works in Wheal Britain, where the lodes are described as being very rich. Capt. Pryor has assigned to North Treskerby adventurers so much of the tin ground leased to him as is comprised within the limits of their copper sett. This he liberally did, without any money consideration.

It is to be regretted that such an honest speculator as Mr. Phillips should have been misled in this matter, for Capt. Pryor obtained the tin grant long before Mr. Phillips thought of applying for a lease of Wheal Britain. If my advice were asked in the matter I should say to Mr. Phillips, "Seek terms with Capt. Pryor, otherwise you will be open to an injunction restraining you from working on the tin." R. S.

CIRCULAR MINING—EMMA SILVER MINE.

SIR,—I have just been favoured with a Circular, dated July 27, signed "W. Hannam and Co.," to which, for the benefit of the unwary and timid shareholders in the Emma Mine, permit me to call attention. The gist of the Circular is clearly an attempt to prevail upon all *bona fide* shareholders to part with their stock, upon the strength of the vague and dismal prognostics of W. Hannam and Co. I shall trespass as little as possible upon your valuable space, while I endeavour to show that W. Hannam and Co. are not exactly the philanthropic individuals they desire to make themselves appear. After stating (which the shareholders have heard already twenty times over) that 1000 tons of ore *never existed* (which the vendors allowed for), and making sundry objections, having little foundation save in their own gloomy imaginations, the *summum bonum* of W. Hannam and Co.'s erudite Circular (in which the paw of the "bear" now and then inadvertently protrudes itself) appears to be as follows:—"All we say is to *bona fide* holders—our advice is not to speculators—take your money, and thank your stars for a narrow escape of serious loss."

It is most amusing to compare this with the observations of W. Hannam and Co., made in a former Circular, entitled, "A Retrospect, an Apology, and a Prophecy." After alluding to the meeting held on March 7, they write thus:—"We at the same time requested our friends to telegraph their orders (to buy) to us." No doubt it is now the desire of W. Hannam and Co. that orders to sell should be at once telegraphed to them by "all *bona fide* shareholders." The writer then adds:—"We now proceed to give our reasons why the shares have not, up to the present, reached a price warranted by by its actual position as a dividend-paying property now, and its prospects of the future; for it must be fully comprehended by all who deal in mining shares that such properties should command a price equal to their prospective worth, and not merely that of their actual dividend-paying powers in the present. We may here remark that our estimate of any foreign mine is that to be at par it ought to be making profits of 20 per cent., with reserves equal to four years' working known to exist. We will shortly proceed to show that this estimate is far surpassed by the actual facts, and that even the Chairman's statement of the present value as really 40*l.* to 50*l.*, will bear critical examination, judged even by the standard we have laid down as the basis of calculation."

Now, Sir, when persons like Messrs. Hannam and Co. contradict themselves so palpably—at one time blowing hot and at another blowing cold—what reliance, I ask, is to be placed upon their benevolent and *disinterested* opinions? I think the shareholders of the Emma Mine will best consult their own interests, not only by discarding all such counsel as that now offered by W. Hannam and Co., but, by bearing in mind and acting upon the sensible advice tendered by Capt. Bedford Pim to the holders of Honduras Bonds—to stand shoulder to shoulder.

July 30. A FELLOW THAT HATH HAD LOSSES.

EMMA MINE.

SIR,—This carcass has been chased by Bears, Lions, Wolves, and other Circular writing individuals, and curbstone brokers from America, during the past month or two with some success. They managed to drive the stock down to a big discount, but the usual avarice of these animals induced them to try and devour the whole carcass; but, unfortunately for them, a sudden reaction has taken place, and on the winding-up of the monthly account, yesterday, two or three of these individuals were unable to pay up their losses, and the result is three brokers have *failed*. "Bear" operations are all right when conducted properly, but this new American "letter writing" plan of slaughtering the property has failed in this instance; and as it is the first time such tricks have been tried here it is to be hoped we shall not hear any more from these gentlemen. I think not, as they have found out that John Bull is not to be frightened as easily as an American investor is. This game may answer in California, but will not pay here, as results have proved.

Aug. 1. A SHAREHOLDER IN AMERICAN MINES.

THE ANGLO-ARGENTINE COMPANY.

SIR,—Will you kindly allow me space to direct attention to the affairs of the Anglo-Argentine Company? The company formed some years ago to work silver mines at Hilario, failed in its immediate object, owing (by the chairman's account) to the efforts made by certain people in the country to make the company pay too dear for their bargain. And here I have the first cause of complaint. Not a word respecting the failure was, so far as I recollect, vouchsafed to the shareholders; and at a meeting reported in the *Mining Journal* of Jan. 15, 1870, the Chairman deprecated all enquiry, at the same time holding out a hope that soon after Major Rickard's return he would be able to procure the mines at a cost considerably less than the terms originally stated. Since then not a single word, so far as I am aware, has been heard respecting this property.

But now for my second complaint. In spite of the above disappointment, the company was not allowed to collapse: but some extensive gold fields at Cualilan, said by Major Rickard to be extremely rich in minerals, were secured, and men and machinery sent out. At the meeting referred to above Major Rickard completely captivated his hearers with his account of the romantic way in which the mines were first discovered, by his description of the miserable appliances by which a wonderful yield of gold had been obtained from the Pique Mine, stating also his firm belief that our ores were identical in value, premising further that in less than a year tangible proof would be in the possession of the shareholders. The result of all this, coupled with the Chairman's endorsement, was to send us all away firmly convinced our shares in this company were to be so many "open Sesames" to fortune. Further, to confirm this belief, the manager stated in one of his reports his firm conviction that more gold would be obtained from the north mine than had ever before been extracted from any mine in South America.

Now, Sir, how comes it that, in spite of all this, the shares are quoted in to-day's *Times* as sold at 10*s.*? Where does the fault lie? For it seems to me that if gold could be obtained in the way described by Major Rickard, with the advantages of the best machinery (which, of course, was obtained), far better results ought certainly to have followed. That it is not so is so great a mystery that were my stake in the company larger, and had I the time and means, I should certainly try to get a committee of enquiry. I trust that the insertion of this letter may produce a satisfactory explanation from the directors, or, better still, that it may be rendered of no account by the receipt of good news from Gualilon. DISAPPOINTED.

[For remainder of Original Correspondence see to-day's Journal.]

INSTITUTION OF MECHANICAL ENGINEERS.

The proceedings of the annual congress of the members of this Institution commenced on Tuesday morning, in St. George's Hall, Liverpool. The chair was occupied by Mr. C. W. SIEMENS, D.C.L., F.R.S., the President, and there was a large attendance of members.

The CHAIRMAN, in opening the proceedings, said two important subjects had occupied the attention of the council for some time. The first was the question of holding a London meeting at least once a year. In order to enable them to do this it would be necessary to alter their bye-laws, and notice would be given for such an alteration to be proposed and discussed. The second important subject which had engaged the attention of the council was the desirability of having a home for their Institution. The state of their finances had hitherto hardly warranted their attempting such a step; but he was happy to say that their finances were now in a flourishing condition, as they had securities representing invested funds to the amount of 8000*l.*, while their income exceeded their expenditure by 800*l.* a year. They, therefore, considered that they might boldly attempt the erection of a proper building for their accommodation when they were assembled at their usual place of meeting. Enquiries had been made with respect to an eligible site which had been offered to them in Birmingham, and a rough estimate had been prepared, which showed that a building like one which was suggested would cost about the sum of 12,000*l.* A motion would, therefore, be brought forward in the month of January next, which would enable the subject to be discussed. The Chairman then proceeded—Although it is not my intention to take up the time of this meeting with a lengthly address, I feel bound to open our proceedings with a few remarks in acknowledgment of the very courteous invitation in virtue whereof we are now assembled in this great town of Liverpool, to discuss with our Lancashire friends and brethren in pursuit of questions of considerable scientific and practical interest. Considering that only two years have elapsed since Liverpool opened its spacious halls to the British Association, the invitation given to our institution to hold here our general meeting for the year current speaks well for the scientific interest astir in this community, which is remarkable alike for its commercial and engineering interests.

It behoves me also to congratulate the Institution on the very able and appropriate papers which have been presented, and to call attention to the importance attaching to them, in order that you may be prepared for their discussion. Foremost on the list we find a paper "On the Progress Effected in Economy of Fuel in Steam Navigation," by a member of the body well known to us all for his power of grasping his subject with a view of bringing out in relief its salient points. This forms an important branch of the general subject of "saving fuel," which, in the presence of ever-increasing demand and of failing supply, is rapidly rising into a question of first-rate national importance. The annual coal production in Great Britain amounts at present to 120,000,000 tons, which, if taken at 10*s.* per ton of coal delivered, represent a money value of 60,000,000*l.* It would not be difficult to prove that in almost all the uses of fuel, whether to the production of force, to the smelting and reheating of iron, steel, copper, and other metals, or to domestic purposes, fully one-half of this enormous consumption might be saved by the general adoption of improved appliances which are within the range of our actual knowledge, without entering the domain of purely theoretical speculation, which latter would lead us to the expectation of accomplishing our ends with only 1-8th or 1-10th part of the actual expenditure. In taking credit, however, for only 50 per cent. of the actual average expenditure, we arrive at an annual money saving of 30,000,000*l.* per annum, a sum equal to nearly one-half the national income!

Nor does this enormous amount of waste indicate all the advantages that might be realised by strict attention to appliances for saving fuel, which are, generally speaking, also appliances for improving the quality of the work produced. In a national point of view it is of great importance that our coal deposits should be made to last as long as possible; and, regarding public health and comfort, the smoke nuisance is only another name for waste of fuel—smoke, indeed, being nothing more or less than unconsumed coal. I am ready to admit, however, that the introduction of all coal-saving appliances involves a considerable expenditure—an expenditure which has to be conducted carefully under the guidance of the mechanical engineer, but which, if properly directed, yields immediate and very ample returns. In reverting to the important branch of the general subject which will be prominently brought before us, we shall find that our best marine engines consume to-day rather less than one-half the amount of fuel which was thought practically indispensable nine years ago, when the same subject was brought before us in holding our general meeting here at Liverpool, showing that one section of our fraternity have at any rate not been idle in the interim. If nine years hence my successor in this chair will be able to announce a similar step in advance, we shall have the satisfaction of knowing that our further discussions of the subject will not have resulted in "lost energy."

Another kindred paper on our list deals with the economic getting of coal, and recommends a well-considered mechanical process as a substitute for human labour with the pickaxe, which latter constitutes, in my opinion, a reproach to our age of professed humanity and mechanical resources. Two other papers deal with interesting applications of hydraulic force—the one to the working of shop tools, and the other to the production of a vacuum in steam-engines without the aid of an air-pump; and in another paper a further description will be given, with attendant results, of the compound-cylinder blowing-engines at the Lackenby Ironworks, this being an extension of a previous paper on the same subject. In addition to these, we shall have a paper on Buchholz's system of decorticating grain, which is interesting as involving a new process of separating the flour from the grain, of which you will have an opportunity of judging by seeing it in actual operation. On a late occasion a plan was brought before us for breaking up the grain by dashing it against the rotating pins of Cor's disintegrator, whereas, according to Buchholz's plan, it is ripped open and the flour scraped off the bran by a succession of fluted steel cylinders driven at differential speeds. Without wishing to express an opinion in favour of the one method or the other, it appears likely to me that the millstone—a contrivance represented on Egyptian monuments, and mentioned in Holy Writ, and which has continued to prepare for us our staff of life up to the present day—may be arrested in its meritorious course in obedience to the just but harsh decrees of the most uncompromising of beings—the mechanical engineer of the present day. Enough has been said to impress upon you the importance and variety of the work before you.

Mr. F. W. BRAMWELL, of London, read the first paper—"On the Progress Effected in Economy of Fuel in Steam Navigation, considered in relation to compound cylinder engines and high-pressure steam."

The congress resumed its sittings on Wednesday morning, when the Chairman announced that the Institution had received a most cordial invitation from the Cornwall Polytechnic Society to hold their next general meeting in that district; and the council thought it would be in the interests of the Institution to accept the invitation, inasmuch as Cornwall was a district which had not been visited before, and which presented many objects of interest to the mechanical engineer.

COAL-CUTTING BY MACHINERY.

The SECRETARY read a description by Mr. Robert Winstanley, of Manchester, of a coal-cutting machine, with rotary cutter, worked by compressed air. The writer began by saying that at no time in the history of the coal trade had a greater want been felt than at the present for the substitution of machinery for manual labour in the working of coal; and never since the year 1761, when Michael Menzies made one of the earliest attempts on record to construct coal-cutting machines, had the difficulties experienced by coal proprietors been greater than now—a time when it is almost impossible to make production keep pace with the demand, and when the difficulty is further increased by the lessened output or production which accompanies a high rate of wages. Any improvement, therefore, in the working of coal mines, which would increase the quantity of coal got and diminish the cost of production, and at the same time relieve the miner of the most laborious and dangerous part of his work, must be a benefit, not only to those immediately interested in the work, but also to the consumer generally. The object of the paper was to describe a machine which had been worked daily or nightly for the last two years at the Platt-lane Colliery of the Wigan and Whiston Coal Company, in a seam of coal known by the name of the "Pemberton Little Coal." The coal is about 2 feet 4 in. in thickness, and is notoriously hard—so much so, that it was with the utmost difficulty men were obtained to work it; and at one time the seam stood idle for some time, because colliers could not be got to work in it, whilst the proprietors had always to pay a higher rate for getting it than for any other seam coal they worked. The cutter, which is the invention of the writer and Mr. Barker, is, like most others, driven by compressed air, which is conveyed down the shaft and along the main roads in iron pipes, and from the end of the drawing road to the machine in India-rubber hose-pipes, 2 in. in diameter. The coal is cut by a spur-wheel, fitted with teeth, this wheel being 3 feet 6 in. in diameter. The wheel cuts its way into the coal without any previous holing, and the depth of the holing made by the wheel can be varied at will. The machine is drawn along the face of the coal as it holes or cuts its way, throwing out the small coal or slack between the tramrails upon which the machine runs.

The chief advantages of the machine are the following: 1. What may be called the "swivel movement," by which means the cutter "holes" its own way into the coal, cutting, in fact, from nothing up to 3 ft., and for bringing the cutter back underneath the framework of the machine when not at work: and in this position the machine can be taken through any narrow roads or portions of the mine without the necessity of removing the wheel from the machine. Another advantage is that of applying the power to drive the cutting wheel directly on the periphery of the wheel; whilst this mode of gearing also allows the small pieces of coal or slack to fall through to the bottom, so as not to lock or clog the teeth of the machine. The average rate of holing by the machine is from 25 to 30 yards per hour, according to the material the machine is holing in; but this, the writer said, was, after all, a matter of no great importance, as the great points to be considered were the amount of work the machine would do, and how it would do it. The machine in question had frequently cut the whole length of the face of 120 yards in a night, or between 7 p.m. and 4 a.m. This, however, included all stoppages, such as meal times, changing cutters, &c. In the same mine 5 yards per day is much above the average work for one man with the pick; and, under ordinary circumstances, it is considered the work done by the machine would be equal to that of 40 men. The machine works in the night-time, the coal being removed by ordinary manual labour in the day. No powder is used, the coal falling by its own weight after it is holed by the machine. For over six months the machine had had little or no repairs, and the practical advantages found in its working are, the writer said—first, that without the cutter they could not get men to hole this particular coal, on account of its hardness; second, that when the seam was worked by manual labour the proportion of coal and slack was as three of coal to one of slack, and with the machine it is eight of coal to one of slack: third, that work is done independently of the men, who could not be got to work regularly, and, consequently, the production is more certain with the machine.

The actual cost of getting the coal by the machine and by hand-labour had been found, from the payments made during a period of six weeks at the Platt-lane Colliery, to be as follows: Hand-labour, 3*s.* 6½*d.* per ton; machine-labour, 3*s.* 1½*d.*; showing a saving of 5*d.* per ton by the machine. The profit, however, was considered to be absorbed by the expense of compressing the air for the machine, by interest on outlay, and by wear and tear. The increased value of the produce, in consequence of less slack being made by the machine than by hand-labour, was estimated as follows:—By hand-labour, 3 tons of coal at 11*s.* per ton, and 1 ton of slack at 7*s.* 3*d.* per ton, 40*s.* 3*d.*, or an average value of 10*s.* 0¾*d.* per ton; by the machine, 8 tons of coal at 11*s.* per ton, and ¼ ton of slack at 7*s.* 3*d.*, 95*s.* 3*d.*, or an average value of 10*s.* 7*d.* per ton, being an increase of 6¾*d.* per ton in the value of the coal when worked by the machine. In a seam of coal a few inches thicker than that of the Platt-lane Colliery, and under more favourable circumstances, it was considered there would be a saving over manual labour of from 20 to 30 per cent. The cost of getting the coal by the machine, given at 3*s.* 1½*d.* per ton, could not, however, be taken as a correct representation of the cost, the one at the Platt lane Colliery being the first that was put to work, and, as a commencement, a liberal rate of pay was given to the man attending it, as an inducement to give it a fair trial. The same man has now been working the machine on contract for the last 14 or 15 months, and earns more than three times as much per day with the machine as he previously did with the pick.

The CHAIRMAN said one great advantage of the machine was that it would not strike—(laughter)—and a man to superintend its working could be got more readily than men could be got to pick out the coal themselves.

Mr. FIDDLER said the machine had been working at the Platt-lane Colliery for the last 15 months in the entire charge of a working collier.

Mr. LAWRENCE said it seemed to him that in a soft kind of coal the machine would jam itself in a few minutes. It might do very well for the seam in which it was now working, but what would do for one class of coal would not do for another.—Mr. WINSTANLEY said he thought that coal-cutting machines would never be required for soft coal, but only where the coal was very hard and difficult to get by hand-labour.

Mr. MENELAUS, engineer of the Dowlais Works, South Wales, said he never yet saw a machine which could successfully compete with colliers' labour, and he was glad that the inventor agreed with him that in soft coal it would not be of any use. At Dowlais the holing was about one-tenth the whole labour of the colliery. The men worked short hours. Nature, in fact, brought the coal down for them, so that there was very little holing in that district, and he did not think it would pay there to introduce very best machines invented for the purpose of holing coal. The machine which had been explained was one of the best he had seen, and he thought that where there were thin veins and hard coal it might be introduced with very great economy.

The CHAIRMAN said it seemed to be generally agreed that in the cutting of hard coal great advantage might be derived from the use of the machine. He added that the members would have an opportunity of seeing it at work on the following day in the Two and a-half Feet Mine of the Platt Lane Colliery.

Thanks were voted to Mr. Winstanley for his paper; and a similar compliment was paid to the authors of two other papers which were read—"On the Application of Water Pressure to Shop Tools and Mechanical Engineering," by Mr. R. H. Tweddell, of Sunderland; and "On Buchholz's System of Decorticating Grain, and Making Semolina and Flour, by Means of Fluted Metal Rollers," by Mr. W. P. Baker, of Bristol. Thanks were also voted by acclamation to the mayor and corporation for their kindness in granting the free use of rooms in St. George's Hall for the purpose of the meeting; to the local committee: Colonel Clay, the chairman of the committee; and the honorary local secretary, Mr. D. R. Ratcliffe, for their active exertions in promoting the success of the meeting, and for the excellent arrangements made by them for the occasion; to the proprietors of the various works so liberally thrown open to the members during the meeting; and to the London and North-Western Railway Company for their kindness in arranging special trains on liberal terms to enable members to visit different works open to them. The sitting of the congress then terminated.

[We shall give some of the papers and other matters next week. In the Supplement to this week's *Mining Journal* we publish a Description of Messrs. Blundell's New Pits, Wigan, which were visited by the Engineers on Thursday.]

It will be seen that it has been arranged to hold the next meeting in Cornwall.

MANCHESTER STEAM USERS' ASSOCIATION.—The monthly meeting of the executive committee of this association was held at the offices, Corporation-street, Manchester, on Tuesday, July 30 (Sir WILLIAM FAIRBAIRN, Bart, C.E., F.R.S., &c., President, in the chair), when it appeared from the report of Mr. L. E. FLETCHER, chief engineer, that during the past month 273 visits of inspection had been made, and 679 boilers examined—406 externally, 6 internally, 6 in the flues, and 261 entirely; while, in addition, 6 new boilers were tested by hydraulic pressure, as well as specially examined, both as regards their construction and complement of fittings before leaving the makers' yard. The following defects had been met with:—Furnaces out of shape, 1; fractures, 12; blistered plates, 4; internal corrosion, 12; dangerous, 1; external ditto, 8; internal grooving, 5; external ditto, 13; water-gauges out of order, 4; dangerous, 2; safety-valves ditto, 4; dangerous, 2; pressure-gauges ditto, 6: total, 69 defects; dangerous, 5. During the month two explosions had arisen from boilers not under the inspection of the association, injuring eight persons, though fortunately not fatally. The cause of one of these explosions, which had been investigated by an officer of the association, was found to be the same as that so frequently met with on previous occasions—the use of an old worn-out boiler, the plates along the bottom, where resting on the brickwork, having been reduced by external corrosion till they had become as thin as a sheet of paper. This corrosion was greatly accelerated by the fact that the boiler was not set upon suitable seating blocks, but let down on to the solid brickwork with wide seatings, which harboured moisture, and thus promoted the corrosion. The entire boiler had been thrown from its seat, and a considerable portion of it hurled across a deep ravine to a distance of 120 yards. The roof of the boiler-house had been blown up, and the slates scattered in all directions. It was a wonder that no loss of life resulted. Competent inspection would have prevented this explosion.

BREAKING BAR-IRON.—The peculiarity of the machine invented by Mr. RICHTER, of Eintrachtschütte, Prussia, and its advantages over other puddle bar breaking machines are: First, This machine will break the mill bar in any required part without in the least degree injuring or deforming the same.—Second, The said machine stops itself as soon as it has completed its work; that is to say, when the crank-shaft has made one ascending and descending movement it ceases to act.—Third, The bent up end of the puddle bar is broken off and taken back from the crank-shaft through the crank-pin.

THE MINING JOURNAL.—Now ready, neatly bound, price 1*l.* 10*s.*, VOLUME XLI., for the year 1871. To be had through any newsagent, or bookseller, or direct from the *Mining Journal* office, 26, Fleet-street, E.C.

Meetings of Public Companies.

HONDURAS BONDS.

A meeting of bondholders was held on July 26, at the London Tavern—Capt. BEDFORD PIM, R.N. (Special Commissioner of the Government of Honduras), in the chair.

The notice convening the meeting having been read,

The CHAIRMAN, before proceeding to the business of the meeting, said that the Minister of Honduras, who had convened the meeting, had requested him, as Special Correspondent of that Government, to take the chair on that occasion. He had done so with a great deal of pleasure, for, looking at the past, no less than the future, he had great faith in the Honduras Government. (Loud cheers.) The object of the meeting was to lay a statement before the bondholders, and which he would have the honour of reading to them immediately; and also to afford any lady or gentleman present the opportunity of asking any question they may deem proper, which it would be his duty to reply to as far as lay in his power. (Hear.) With the view of avoiding the possibility of any mistake, and also as a matter of reference for the future, he proposed reading the statement to be submitted to the meeting, as follows:—

GENTLEMEN,—The importance of this meeting to the interests of Honduras and of the bondholders cannot well be exaggerated; indeed, I feel the responsibility of presiding over you as Chairman on this occasion so keenly that I have committed the remarks I intend to make to writing, so that hereafter no mistake may occur in reference to my *ipissima verba*. It would be mere affectation to say that I am quite unaccustomed to public speaking, but nevertheless, with your permission, I will read the statement I intend to make to you on this occasion. First, it may be desirable for me to introduce myself to you, as I can scarcely flatter myself that my name is known to more than about 10 per cent. of this meeting. Gentlemen, I occupy my present position because the Government of Honduras, through its accredited Minister, has done me the honour a few weeks since to consider that my long practical experience in Central America may be of some use to them in the present juncture, and perhaps you will expect me to tell you what that long practical experience consists of. As an officer in Her Majesty's Navy, I was employed off and on in the survey of the Pacific side of the Central American Isthmus, from New Granada—now United States of Columbia—on the south to Mexico on the north, during the years 1845 to 1851, but chiefly about Panama Bay. In 1859-60 I was senior naval officer on the Atlantic side of the Isthmus, in charge of the Mosquito Coast, and since then I have been several times across Central America, at my proper cost and expenses, devoted to the project in which everyone present takes an interest—namely, the opening of an inter-oceanic transit from ocean to ocean. My favourite project is through Nicaragua, as you will see by the books on the table, the "Gate of the Pacific," and "Dottings on the Roadside;" but so convinced am I of the absolute necessity of some route from sea to sea which will at least make us independent of the Panama Railway, that I have had no hesitation in accepting the flattering invitation of Honduras, the more especially as the line through that country offers the best chance of an early opening. At the same time, in my opinion, there is room for every route, provided only a judicious system of emigration is combined with the railway works. I have no doubt whatever that, under such circumstances, the lines through Costa Rica, Nicaragua, Honduras, Guatemala, and Tehuantepec, would each and every one pay a handsome dividend. Now, gentlemen, I have explained to you the reason I occupy my present position, and I must take leave to say that the Government of Honduras has proved by this step alone its anxious desire to complete the Inter-Oceanic Railway, and at the same time shown the *bona fide* manner in which the work has been undertaken. On my part I may say, I think without vanity, that by waiving any feeling of rivalry on behalf of my favourite Nicaraguan project, and heartily throwing myself into the gap of the Honduras Railway, I also give a guarantee that no stone will be left unturned on my part to bring that great undertaking to a successful and, what is more, a speedy termination. And now, gentlemen, I turn from the subject of self with the greatest gratification, to give you, as I understand, a brief *resume* of the position of Honduras in this matter. Honduras having satisfied herself of the feasibility of a transit from ocean to ocean through her territory, proceeded to raise certain loans in Europe for the purpose of constructing the necessary works; everyone present is, or ought to be, cognisant of that fact; but very few, I suspect, are at all aware of the pains, the labour, and the expense of raising loans based upon the completion of a great, a glorious, but still a difficult work. The mere accepting 80*l.* for every 100*l.* and paying 10*l.* per annum for the use of that 80*l.*, does not by any means cover the expenses, the contingencies, and the eventualities of such a transaction. Nevertheless, Honduras has acted, in spite of temptations, of wars, and of revolutions, with exemplary good faith in this matter; she has met every obligation to the hour, and she has done her very best, in spite of frightful difficulties, to push on the works, and I have no doubt whatever that she will meet her reward in the successful completion of the gigantic enterprise she has undertaken. Honduras has set her heart upon a transit across her territory, and she has not hesitated to make great sacrifices to attain that grand object. She has raised money at a high figure, she has actually mortgaged all the State domains and mahogany forests, and be it ever remembered she has punctually met her obligations from that day to this. Is it not, therefore, very silly, to say the least of it, for the bondholders to allow the lying rumours set afloat by the "bears" to frighten them into selling their stock at any price? I am given to understand that small fortunes have been made at the expense of the Honduras holders by those who operated quickly; but others who have been too greedy have yet to close the account, and then we shall see some of those "bears" with severely burnt paws. I am happy to find, from the very large number of bondholders who have called upon me, that their eyes are at last opened to the set made upon their property, and I have no doubt that they now entertain a very different idea of the value of that property than they did three weeks ago. But with the financial arrangements I have nothing to do. My business is to see the railway completed; that accomplished, all will be *couleur de rose*. Many bondholders seem to think that if the next coupon and drawing is provided for, nothing more can be desired; but I venture to tell them, although I have no earthly doubt that the next coupon and drawing will be provided, yet that upon the completion of the railway depends the consolidation and permanency of their investment; and I should like them to convince themselves how much it is to their interest to strengthen the hands of the Honduras Government under the present circumstances, for hitherto, I cannot help thinking, they have subjected that Government to unmerited contumely by their weakness in yielding to a panic got up by interested speculators. I now proceed to lay before you the exact position of the railway works, so far as I have been able to understand that position during the short time of my tenure of office. The first section, about 60 miles of the railway, is completed, and in working order. In reference to the state and condition of that portion I shall refer you to the pamphlet just published by Mr. Brooks, C.E., who has recently returned from Honduras, and who was last year over the line several times. I have known Mr. Brooks several years, being myself an associate of the Institution of Civil Engineers, of which he has been a member upwards of 30 years. The chief value of Mr. Brooks' statement arises from the fact that he is in no manner or shape connected with the railway, and that he has never held a bond of Honduras, so that no one can doubt the impartiality of his dictum. For my own part, I shall not attempt to disguise from the meeting the many and great difficulties which have beset the railway works. The present unsatisfactory state of affairs arises from the unforseen disturbances and wars which during the last three years have perpetually upset the plans and arrangements made for carrying on the works, especially in respect to second and third sections, where the brunt of these disturbances has had to be borne. The natives employed in the construction have been taken away at a moment's notice for military service, as well as those also employed on the mahogany works and silver mines, both of which were producing well when the wars and rumours of wars, which unhappily prevailed, put a stop to the export of produce. These unforeseen events will explain how so much money has been expended in paying interest, and in other unproductive expenses. But I would point to analogous undertakings, which have been brought to a triumphant completion, after contending with greater difficulties than hitherto met with on the Honduras Inter-Oceanic Railway. Look at the Panama Railway, look at the Atlantic telegraph, and I venture to say that the most timid bondholder has no right to anticipate disaster to the undertaking in which he is now embarked. I have the utmost confidence that the railway will be speedily completed, and that the bondholders will reap the reward of their patience and confidence in Honduras, as represented by its excellent Minister Plenipotentiary, Don Carlos Gutierrez, who for so many years has held, with such credit to himself, the high position he enjoys at our Court. Mr. Brooks will tell you a great deal about the fertility and salubrity of Honduras, but I suspect he does not know that a powerful French company is already at work there extracting oil, and that it is even contemplated to establish a direct line of steamers between Europe and Honduras, but still these are indubitable fact, and show clearly that others besides Englishmen are alive to the value of Honduras, and that the country itself is progressing. It would be almost a work of supererogation if I were to quote to you a list of eminent persons who have spoken and written in favour of Honduras, but I must mention, for France—Herran, Belle, &c.; Germany—my dear personal friend, the great Alex. Von Homboldt, who wrote to me almost in his last hours; and for England, a galaxy of great names. I am given to understand that the war, or revolutions, or both, which have given occasion to the "bears" to trump up the lying rumours which have proved so profitable to some of them, and so disastrous to many unfortunate bondholders, has been brought to a successful termination, and that you may anticipate with every confidence a sufficient continuance of peace and quiet to ensure the due completion of the railway. I ought, perhaps, to mention that the question upon which Honduras, Salvador, and Guatemala have been so greatly agitated of late years is a religious one—namely, the expulsion of the Jesuits; and that not having the means of accomplishing such a purpose by virtue of an Act of Parliament, as in Germany, resort was had to bayonets, and with a success as decided in the New World as in Old, the men now in power have gained their object, as may be seen by the *pronunciamiento* I hold in my hand. For my part, I have every confidence that those in high places, both in Guatemala and Salvador, as well as in Honduras, will now turn their attention and exert themselves to the utmost to developing the wonderful resources of their respective States in strict unity, bound together as they must be by the late successful issue of a common object. Indeed, I have reason to believe that the former State, Guatemala, will try to emulate Honduras in pushing a transit through her territory; in fact, the Government of Guatemala owes me at this moment a considerable sum of money for surveys which I caused to be made some two years ago for that purpose. Before leaving the railway, I think it right to clear up once and forever any doubt which may exist in the minds of the bondholders respecting the treaty obligation of this country towards the Honduras route. On Tuesday night last I placed in the hands of our member for Middlesex, Lord George Hamilton, the following question, which you will see he has most kindly placed on the notice for Thursday next:—

"Lord George Hamilton. To ask the Under Secretary of State for Foreign Affairs whether he 'Treaty of Friendship, Commerce, and Navigation,' between Her Majesty and the Republic of Honduras, signed at London, Aug. 27, 1856, in which Her Majesty 'guarantees positively and efficaciously the entire neutrality' of the Inter-Oceanic route, and engages in conjunction with the Republic of Honduras, when the road is completed, 'to protect the same from interruption, seizure, or unjust confiscation, from whatsoever quarter the attempt may proceed, is now still binding upon the high contracting powers.—Thursday, July 25, 1872."

That question has not been yet answered, for the reason contained in a note I have just received from Lord George Hamilton, which I will read to you, and which is yet another proof of the indefatigable attention and kindness of his lordship in respect to the interest of this constituency.

"*Hampton House, Green-street, W., July* 24, 1872.—DEAR CAPTAIN PIM: I have just got a note from Lord Enfield, asking me to postpone my question until Monday, as they (the Foreign Office) will not have the legal opinion of those whom they have consulted by to-morrow. I am afraid I must postpone it, as he suggests; could you manage to postpone your meeting of Friday next?—Yours very truly, GEORGE HAMILTON."

I am glad of the delay on the part of the Government in answering this question, not because I entertain the least doubt of the nature of the reply, for here is the treaty itself, dated August 27, 1856, and presented to both Houses of Parliament by command of Her Majesty, 1857; but because I hope the Government will see fit to announce in the interests of so many of their fellow-countrymen who have large embarked their capital in the Honduras bonds for building the Inter-Oceanic Railway (and many gentlemen, I am told, have embarked their little all, the savings of years of toil and industry) that not only is the Government, as a matter of course, prepared to fulfil its treaty obligations to the letter, but that, in the instance of Honduras, its good offices will be forthcoming to aid that gallant State to the utmost of its power in completing the noble work it has begun, and so strenuously and honourably striven to accomplish against every obstacle both natural and unnatural which has been arrayed against it. In fact, I have every reason to think that our Government will act generously in this matter, for you will perceive at the end of the letter I shall now read to you that an English man-of-war has already been sent down to protect your interests.

"7, *Wurnford-court, July* 19, 1872.—SIR: Knowing you are interested in the prosperity of Honduras, I have to inform you that I have seen a letter, dated June 11, from a relative of mine, who is now one of the staff of the Honduras Railway Company. He says there is a petty revolution going on; but it has not affected the railway in any manner, the works going on as usual. He does not apprehend the slightest danger, as a man-of-war has been specially sent to the coasts to protects the interests of the stockholders, and the insurgents are evidently afraid of the blue jackets and marines. Yours truly, HOSIER MORGAN.

"Captain Bedford Pim."

Another important consideration with respect to the railway is the position of the contracts; and here, again, we have to lament very great disappointment, but I am happy to say originating, in a considerable degree, from the unfortunate state of the country. Although I will not disguise from you that there is not that cordial feeling between the Government and Messrs. Waring Brothers and M'Candlish, the contractors, which might subsist between them, yet a little quiet meditation will, I am convinced, soon set matters to rights, for you must bear in mind that, taking one item alone in the contract—that of iron—I find that it has almost doubled in price since they commenced their works, and, therefore, those gentlemen must be treated with consideration. I shall do my best to act in this way towards them, and I hope with success; but, whether or no, I pledge my word to this meeting that no effort on my part will be wanting to push on the works, under any circumstances, so that no time may be lost in bringing to a happy completion that Inter-Oceanic Railway upon which everyone's hopes are based. I cannot resist telling you, while upon this subject, that I have little doubt that the Government of Honduras will themselves undertake the earthworks, and, having some thousands of soldiers at their command who will gladly work for a small increase of pay, I cannot help thinking that as fast as the rails can be laid the earthworks will be completed for their reception, and I leave you to judge how large a percentage of the cost will thus be removed from the shoulders of those who put their money into this great undertaking. This leads me to the important point—Is there sufficient money to do this? No—there is not sufficient money to complete the works; but so entire is the confidence in influential quarters in the honour and integrity of Honduras that when the time comes I do not doubt that money will be forthcoming without troubling the bondholders for one single shilling, if only those bondholders will act like men, and maintain a proper confidence in the value of their property—this, I take it, is the gist of the whole matter; I hope no insane questions will be put to me on this point, because I shall answer fully, and I put it to your judgment whether this would be politic and advisable for your interests in the present state of affairs. Gentlemen, no words of mine, if your own common sense does not commend what I say to your minds, will be of the slightest use in persuading you to act in respect to your Honduras property like men of business and men of sense. If you still allow the panic to prevail which interested speculators have initiated those speculators will rejoice and reap a rich harvest at your expense—you will be victimised without mercy, and laughed at into the bargain; but, if you determine to stick by the ship, do act like men with some little pluck, and repose confidence in a debtor who has never yet given you the slightest reason to doubt his honesty and good faith. I am here to assure you that you will not be deceived, that the utmost exertion will be made to keep good faith with you, and that nothing will be left wanting to bring the Inter-Oceanic Railway, upon which all hopes are based, to a successful and speedy completion. Gentlemen, you must see which way your interests are served, and I have no earthly doubt you will act accordingly. But I should not be acting with perfect frankness if I did not point out to you (painful as is the subject) the great mischief which has been inflicted on your property by the action of a self-constituted body, styled "The Council of Foreign Bondholders," of which I believe Mr. Gerstenberg is the chairman, and Mr. Hyde Clarke secretary. Prompted by the best intentions, this last-named gentleman has addressed the Minister Plenipotentiary of Honduras in a manner which I, for one, consider most uncalled for, not to say disrespectful; but I will just read to you His Excellency's reply to the last letter:—

"*Honduras Legation, London, June* 25, 1872.—SIR: I beg to acknowledge the receipt of the communication, dated the 18th inst., addressed to me as Minister Plenipotentiary of my Government to the Court of St. James's, and signed by you as Secretary of the Council of Foreign Bondholders. The action of the association you represent in questioning the credit of my Government involves such grave considerations that it will be my duty to submit to my Government a report upon the subject, and I am sure you will recognise the propriety of supplying the information which I am desirous of transmitting. At the same time, I beg to enquire whether the Council of Foreign Bondholders is an institution established or recognised by the English law as having *ex officio* or otherwise a right to call for information from the representatives or the agents of any foreign Governments in regard financial operations, or is it a mere private trading enterprise? Of whom do the Council consist? By whom, where, and how is the Council elected? Are the duties and responsibilities of the Members and Council governed by any Royal Charter or other instrument to which the public can have access? I defer any detailed answer to your remarks until I have your reply to the foregoing questions; but, assuming that you are authorised to address me on behalf of any holders of bonds for the small Federal Debt of Honduras, I request that you will favour me with their names and addresses, so that if needful I may communicate with them should the statement which Captain Bedford Pim, the Special Commissioner of my Government, will lay before the meeting of bondholders, called for next Friday, not be ample for their satisfaction.—I have the honour to be, &c., CARLOS GUTIERREZ.

"Hyde Clarke, Esq., Secretary, Council of Foreign Bondholders."

Whether intentionally or otherwise I do not pretend to say, but such correspondence has been most injurious to Honduras, and to your interests as bondholders, and I venture to think that it is also dangerous in the interests of commerce that a body of irresponsible individuals should assume a power which will enable them at pleasure to either wreck or elevate an undertaking the promoters of which have or have not succeeded in persuading those gentlemen—Mr. Gerstenberg and Mr. Hyde Clarke—of the *bona fides* of their project. With respect to the legal status of the Council of Foreign Bondholders, I shall say nothing, except that they are a body of gentlemen who rejoice in an *unlimited liability*. Gentlemen, I shall conclude by urging upon you the absolute necessity of sticking together shoulder to shoulder, and supporting your own property, when I have no doubt whatever that you will reap the reward in consolidating your bonds; and I hope that I shall ere long call you together again to report a happy progress in the Inter-Oceanic Railway Works

Mr. FITZGERALD desired some information from Mr. Brooks as to the state of the works of the second and third section of the railway, and his opinion, without pledging himself unfairly, as regards the time that would elapse before the line would be entirely opened.—Mr. BROOKS said, in reply, that he had never seen such excellently constructed works; and, to give the meeting some idea of the quantity of fine timber in the country about their line, he observed that the contractors were actually making the "sleepers" of mahogany. He was well acquainted with the resources of the country, had traversed several hundred miles through it, and felt confident that its vast produce would naturally find its way towards exportation by the company's line. If the commerce of the country was not at present rapidly progressing, the only cause of this lay in the want of railway communication to lay open and develope its resources. (Hear, hear.) The northern portion of the line was the only part in which the engineers would experience any difficulty in the course of construction, and those difficulties, he was happy to say, had been surmounted by employing a vast amount of the valuable timber immediately available. Fifty-six miles of the railway were completed, and he knew of no insuperable difficulties in the construction of the remaining two sections. The section completed was the most difficult of the three. With regard to the time required to finish the line, he considered two years would suffice for its completion. He considered the engineers had acted very wisely in completing the northern section, because they could not get the rails across the country except at an enormous expense, whereas the cost of carriage by their own line was greatly reduced. He knew for a fact that timber and dry goods were then going down the line. (Cheers.) It was, of course, at some inconvenience to the other operations; but still such was the case. In regard to the earthworks of the two remaining sections, he remarked scarcely any progress had been made: the roads were being cleared, and the trees cut down: further operations were delayed until they could bring the iron rails by their railway into position.

Mr. FITZGERALD expressed his entire satisfaction with these answers.

The CHAIRMAN, in summarising Mr. Brooks's remarks, said that gentleman felt perfectly satisfied, after going over the line several times, that everything had been done by the engineers so as to ensure an efficient and permanent working of the line—(hear, hear)—and that, in his opinion, a moderate sum of money would complete the remaining sections. The second section of the line was already commenced, and if the Government employed their soldiers, as was proposed, in the construction of the earthworks there was no doubt the railway would be rapidly completed.

Mr. BUSH asked if the invasion by a foreign enemy was repulsed?—The CHAIRMAN replied that such invasion had taken place, but there was an end to it, and to all insurrectionary disturbances. And, in answer to another gentleman, said the great difficulties in the construction of the line had been overcome. The portion of railway was only a single line, with sidings; it was not intended to have double lines until when, about three years hence, they were in a position to declare, like the Panama Railway Company, 50 per cent. dividends. (Cheers, and laughter.) The contractors had only had the value of the work actually done up to the present time. The line was now earning money; but until it was finally handed over to the company the contractors took whatever receipts accrued from its workings. An estimate of the line's earnings at present should be asked of the contractors.

A GENTLEMAN, at some distance from the chair, put a question in a very inaudible tone with reference to the company projected for the purpose of transporting vessels across the Panama country.—The CHAIRMAN, in reply, stated, although he did not know the questioner in the least, but judging from his appearance—a very gentlemanly one—he should deem him a "bear." (Loud cheers, and laughter.)

Mr. HASLEWOOD said—The issuing of the small loan of 90,000*l.* 5 per cent. Honduras bonds having taken place through him, he begged permission to address the meeting. This is a separate loan, and has not the guarantee of the railroad. It is dependent on the faith of the Republic, with a special assignment of the customs of Amapala, if needful—but only if needful. The dividends were payable through him, and the sinking fund applied by him. Up to this time the funds had always been put into his hands prior to the date for the payment of the interest and sinking fund, and he was informed that he might have the money now for next October if he asked for it: but he forbore to do so, having full faith that it will be forthcoming when due. Surely it was not fair for him to annoy the representative of the Honduras Republic at this moment, when his country had just emerged from the hands of a conquering army, by ungraciously asking him to do that which he (Mr. Haslewood) had neither a legal nor a moral right to require. With regard to the first paragraph of the letter of the Secretary of the Council, which has not been read by the Chairman from a feeling of delicacy, and was that part in which he was most interested, he trusted he might be permitted to remark that he believed the interference of the Secretary of the Council of Foreign Bondholders was quite uncalled for. He did not believe that any influential bondholders had asked the committee to interfere—for he thought that it was more than likely they would, in the first instance, have applied to him. Neither does it appear from the letter that the Council had ever authorised him to write that letter. He might add that the Council of Bondholders appeared to be a myth—it had no active council, and practically consists only of a chairman and secretary. But he had consulted his friend, Mr. Digby Seymour, on the nature and constitution of this Council, and now he begged to ask him to give the meeting the benefit of his legal knowledge.

The CHAIRMAN: It would be a work of supererogation to tell you that Mr. Digby Seymour is the eminent Queen's Counsel, LL.D., and Recorder of Newcastle.

A BONDHOLDER: Is he a bondholder?

The CHAIRMAN: He is a bondholder to a large extent, and, therefore, I am quite certain you will listen to what he has to say. (Cheers.)

Mr. DIGBY SEYMOUR: Mr. Chairman and brother-bondholders, I have very great pleasure in being here to-day, and in having heard that explicit, plain, and open statement from the representative of the Honduras Government who occupies the chair so worthily. Having been for more than 20 years officially and personally associated with the late distinguished engineer of the River Tyne, in the North of England, as Recorder of that town, I was glad to meet its late eminent engineer in the person of my friend Mr. Brooks. I say from a very long knowledge of him as a public servant and a private gentleman he is utterly incapable of swerving from the truth. I may tell you this, from official documents, that the very cause of the recent insurrection and war has been the rising of the country to get rid of the incubus of the Jesuits. The yellow fever is gone, and the country is, I hope, clear of the Jesuits. It is perfectly clear that Honduras possesses a fine and fertile country, and she has a territory inviting to European settlers. She has mahogany and mineral resources of great attractive powers, which only want some English capital and some faith of Europeans to make enterprise a tremendous success. I have seen something of the operations at work on this railway from the beginning. I am quite aware there was at one time an idea which startled the engineering world, that of a ship railway. What is the state of things? You have running this moment the first 60 miles of that railway, doing its work and earning its traffic. The sleepers are of mahogany; but there are no sleepers in the management. They are determined to push on to the finish of the railway. Mr. Brooks has stated he has for six times traversed the railway north and south, east and west, and he told me the condition of the earthworks and bridges are perfect, which forms a guarantee that when the 90 miles of the second section are finished the section will be handed over by the contractors as a complete work. What is it you want? You became bondholders on the faith of public representations. You took the word of the Government, and the security of the Government, and why should you doubt a debtor who is not a defaulter; why should you in a moment throw off your confidence? I have been asked a question with regard to the Council of Foreign Bondholders. I think that nothing could be more honourable or more useful or patriotic than a Council of Foreign Bondholders, carried out in the original idea of that body, when Mr. Goschen sat in that chair. But what was the condition and principle upon which that Council of Foreign Bondholders was established? It was with a view of protecting their interests, and endeavour by gratuitous services of their members and a small charge for the outlay for stationery, vindicate their property and yours in their intercourse with the various commercial transactions of the world and the various Governments who might be borrowers. But, gentlemen, the Council of Foreign Bondholders has lately merged; it was advertised in January, into a Foreign Bondholders' Association. Gentlemen, I have looked through its prospectus, and I tell you the name is a misnomer. It ought to be called the Foreign Bondholders' Commission Agency and Joint-Stock Company. I find it states in capital letters "liability." It admits a possible liability—"Liability to be limited by Royal Charter." Gentlemen, that was printed six months ago; I want to know where is the Royal Charter. The state of the law is this: Royal Charters are now reserved for public educationary institutions, for great corporations of charity, or for the purpose of advancing scientific knowledge throughout the country, but corporations for trade have ceased to be the practice, and have become, I believe, the exception; and I have not the slightest doubt that if the Board of Trade had only that prospectus put before them the Foreign Bondholders would never diminish their liability. Gentlemen, what does it say? "It is proposed to form a bondholders' association of 1000 members, who are invited to supply the requisite means by taking the bond of 100*l.*, and derive the benefit and revenue that might be derived." Call them bondholders or call them shareholders, when the prospectus is put before the public it means this, that 1000 gentlemen with 100*l.* each are asked to find 100,000*l.* to be put into a joint fund to be manipulated and managed and prudently applied and turned about by Mr. Gerstenberg and his secretary, Mr. Hyde Clarke.

A BONDHOLDER rose to a point of order.

M. HYDE CLARKE said he was quite ready to answer every word of Mr. Seymour's statement.

Mr. DIGBY SEYMOUR—I am answering a question. I have not volunteered a statement. I will come to a conclusion presently which will give force to the observations I am making. Among the rights of members I find this—in repayment of all bonds another payment, not exceeding 100*l.* per bond, will be made out of surplus capital over 100,000*l.*, in consideration of the first outlay; therefore there is a proportion of cent. per cent. to these bondholders. After such second payment, the entire assets of the association will still remain the property of the members, and any surplus over the original 100,000*l.* may be appropriated for their use, to the purposes of the association, in such manner as they may hereafter determine. In return for 100*l.*, a prospect is held out to me that out of the earnings of this company I get another 100*l.*—that is, cent. per cent. After getting that, I have still a share in the surplus monies of this association. How are they to make that money? Will it be derived from interest on the investments from the capital and contributions of the bondholders, who may charge the association with the protection of their interest; from commission on claims settled, or fees for services rendered to Governments or bondholders who are not proprietors of the association? It proceeds to add that there are large fields for earning enormous profits by those who will put their affairs and become bondholders in this association; and it further adds, it says, that the council has issued Anglo-Austrian certificates of default, at a charge of 1*s.* 2*d.* per cent., which are quoted on the Stock Exchange at 3*l.* 10*s.* per cent. Allow me to say this, that if the council have done that holding out to their bondholders, they may expect one day to receive a royal charter, and if they have carried on their operations without a protection I say they have individually and collectively broken the law. I will tell you what the law is. By the 4th section of the Joint-Stock Companies Act, 25 and 26 Victoria, it is provided any association or partnership of gentlemen or persons exceeding twenty, who shall engage in any business for the acquisition of gain, is an *illegal* combination or association. I therefore beg to say this, that if my opinion is asked, I unhesitatingly give it. I say those who, without a royal charter exceed the number of twenty, associate themselves for the acquisition of gain in carrying on any business, however honourable, do so in defiance of the law. They broke the law, and although there is no pecuniary penalty, there is a common law penalty for every man who does it. (Cries of "time" and "question.")—I come now to answer a question which I beg to say is not a waste of time. I am of this opinion that if these enormous profits can be made, and if they can be made by causing disunion and want of confidence between Governments and bondholders, if it becomes a direct policy of the chief promoters of an institution like that, to place bondholders in opposition to Governments, so as at some moment to have a handsome commission for endeavouring to bring about peace, then, I say, I am not speaking against time. (Hear, hear.) I protest simply, not against gentlemen of high position adding their influences and judgment together to protect each others interest, but I do protest against gentlemen of great commercial names resigning or giving over the management of an association to parties more interested than themselves, who perhaps at this moment are infringing the Act of Parliament or the common law of the country. Gentlemen, I have so far spoken in answer to a question put to me. I have now to propose a resolution, which I believe will have the cordial support of the meeting—"That this meeting, after full discussion, having heard with great satisfaction the statement of the special commissioner, Captain Pim, on behalf of the Government of Honduras, hereby expresses its firm confidence in the honour and integrity of Honduras, and its determination to support by every means in its power the credit of that Government, so as to assist in every way the prosecution of the inter-oceanic works upon which so much depends."

Mr. HYDE CLARKE rose to address the meeting, but several exclaimed—Are you a bondholder?

The CHAIRMAN: Are you a bondholder?

Mr. HYDE CLARKE: I will answer the question in my own way. (Uproar, and cries of "time.") Capt. Pim knows perfectly well I attend this meeting through the qualification which I hold.

The CHAIRMAN: Are you a bondholder?

Mr. HYDE CLARKE: You know that I am a bondholder. (Cries of "sit down," and uproar.)

A BONDHOLDER rose to a point of order. The motion before the meeting had not been seconded.

Colonel CRAWLEY said he would have great pleasure in seconding the resolution, upon which he made a few remarks.

The CHAIRMAN having failed to obtain an hearing for Mr. Hyde Clarke, whose name, and that of the Council of Foreign Bondholders, called forth a storm of disapprobation, put the resolution to the meeting, and it was carried unanimously, amidst loud cheers.

Mr. HYDE CLARKE again attempted to address the meeting, but was unable to obtain a hearing.

Mr. HUDSON said it was evident the meeting did not want to hear Mr. Hyde Clarke. Although he stated he was a bondholder he was greatly suspected of being a bondholder to an insignificant amount, and for a purpose of considerable magnitude. (Cheers.) As there was no further business for the meeting he proposed a vote of thanks to their Chairman—(cheers)—to their gallant and distinguished Chairman, who knew not only what he talked about, but who knew the country he described thoroughly. He thought he deserved the best thanks of the meeting.

The motion was seconded by several bondholders, and carried by acclamation.

The CHAIRMAN thanked the bondholders for their confidence. He was quite sure that confidence would not be reposed in him without real beneficial results to the bondholders. He had undertaken a very hard work, to put this railway through, but he would strain every nerve to do it. (Cheers.) There should be the utmost openness to the bondholders, and when any of them came to his office he would receive them with the utmost courtesy and kindness. He would do his utmost to make their property as valuable as it ought to be. (Cheers.)

The proceedings then terminated.

As the bondholders arrived at the London Tavern the pamphlet on "Central American Loans," already largely circulated, was put into their hands. On this part of the subject the following letter of a correspondent seems in point:—

SIR,—I attended the meeting yesterday, and trust that the holders will see their interest to keep the property out of the market, and hold on. There was one matter I could not make out, who the person or persons could be who had employed the man at the door to give away the pamplet of Hopkins's. I can understand his writing it and selling it, but not that which seems to me a rare exhibition of philanthropy to give away several hundreds, at least for my good. The interpretation I, with others, put upon it was that it was a dead set made by the jobbers to beat the property out of the market. I wish you would inform me, for the benefit of many country holders not able to go to London, the meaning of it.

July 27. Yours obediently, X.

TRESAVEAN.—At the meeting on July 26, Mr. Henry Rogers in the chair, the accounts for the three months ending June showed a debit balance of 1262*l.* 14*s.* 2*d.*, for payment of which, and the further prosecution of the mine, a call of 4*l.* per share was made. Mr. Edmund Michell having resigned his position

as purser, Mr. Henry Rogers was appointed, at a salary of 10*l*. 10s. per month, and Capt. Quintrall, of Trumpet Consols, was appointed to inspect the mine. The committee nominated at the last meeting having fulfilled their duties, tendered their resignation. The report stated that for the future they hoped to be more successful, by making a better selection of the work to be stamped, which would enable them to reduce the cost, and it is hoped without any falling off in the returns. During the past two months 2 tons 14 cwts. of tin has been sold, realising 219*l*.

AUSTRALIAN MINING COMPANY.

The twenty-seventh annual meeting of shareholders was held at the London Tavern, on Monday,—Lieut.-Col. G. PALMER in the chair.

The notice convening the meeting having been read, the report of the directors (which appeared in last week's Journal) was taken as read.

The CHAIRMAN said he had very great pleasure in meeting the shareholders upon the present occasion, because it afforded him an opportunity of congratulating the shareholders upon the continuous improvement in the company's affairs, as evidenced by the fact that the directors were able to recommend a dividend of 2s. per share, which was an appreciable advance upon the amount paid last year. The property was advancing in its prosperity; although he did not wish to raise too great expectations, still he could not be wrong in expressing his own opinion. He had been connected with the colony from its commencement, and he was pleased to see it, as well as this company, approaching a condition of great prosperity. He had always expressed the most confident belief in the value of the company's property; the capital was subscribed in the first instance for the purchase of the Burra Burra Mine, which they ought to have had, but some delay arose in sending out the 20,000*l*., and it passed into other hands. A very good road had been made by the Government, 48 miles in length, to the River Murray, passing through the company's property; and there would not be the least difficulty in having a tramway laid upon it. The Government had determined to construct a line of telegraph from Adelaide to Port Mannum through the company's township, which was most centrally situated. Owing to the judgment and discretion of Mr. Davenport one of the company's mines, the Reedy Creek, had begun to be worked by the lessees with more energy, and at the date of the last advices there were 30 miners employed, the present favourable price of copper, no doubt, stimulating the operations. Mr. Davenport was also most anxious to encourage the tenantry and others to the cultivation of olive and mulberry trees, for which the climate is said to be particularly suitable. Mr. Davenport had successfully grown those trees for some years, and had now a number of them in a high state of productiveness. He might mention that although the company had a large population up to the present time they had done nothing for them—in fact, it had not been in the power of the company to do anything. A young engineer at his own expense had formed a school, and was educating the children, and he (the Chairman) had written expressing the thanks of the company for what this young man had done and was doing. The tenants had the land, but built their houses. Some properly qualified persons from Ballarat had reported that the Argus Gold Reef, on the company's property, was promising, and had taken a conditional lease to work it upon a royalty. The parties who had undertaken to develope this portion of the property were endeavouring to raise capital for that purpose. The value of the Charlton estate and the little plot at Port Augusta would be materially increased by the carrying out of the proposition now before the Legislature at Adelaide for making a railway across the continent, upon the principle of the American railways—that of granting certain large tracts of land on either side of the line to those who undertook its construction. He thought plenty of people would be found in this country to aid and assist in carrying out such a work, in which case the value of the company's property would be greatly increased. Everything was in a prosperous state, for which (as he had already said) they were under an obligation to Mr. Davenport, who had shown such great judgment and discretion in having, in face of no ordinary difficulties, gained the great confidence of the tenants. Mr. Davenport had proved that in consulting the interests and convenience of the tenants he had promoted the interests of every shareholder in the Australian Mining Company; and Mr. Davenport deserved their best thanks for the judicious policy he had adopted. He then moved the reception and adoption of the report and accounts.

Mr. COLLIER seconded the proposition.

Mr. J. A. FRANKLIN proposed that the following words should be added to the resolution:—"That in the opinion of this meeting it has now become expedient to take measures whereby the cumbrous constitution of the company, fundamentally a mining adventure, should be simplified, in accordance with its restricted aims, and to relieve the company from further liability from all claims."

Mr. FAWCETT seconded the proposition, contending that the uncalled capital tended to keep down the market value of the shares; and although that liability was considered by the board to be merely nominal, it was not so regarded by those who would be glad to connect themselves with the company. Therefore, any arrangement by which that liability could be taken away must be to the advantage of the shareholders.

The CHAIRMAN said that the board were under an engagement not to enter into any mining speculations, but merely to receive their rents. It was not in the power of the board to incur any liability. It was not their business to entertain any proposal affecting the value of the shares on the Stock Exchange; their business was to look to the value of the property. He was sorry to find that this proposition should again be made, and he could not help saying that it was using a mere bugbear in order to frighten persons (poor women and others) who did not know much about business, and induce them to sell their shares at prices far below their value.—Mr. FRANKLIN said he should press his amendment.

Mr. COLLIER said that this question had been raised at each annual meeting, for at least the last ten years.

Only three hands being held up in favour of the amendment it was declared lost, when the proposition was put and carried.

Messrs. R. H. Wotton and F. Collier were re-elected directors.

The auditors were re-elected.

A vote of thanks was passed to Mr. Davenport for his valuable services as agent in the colony. A vote of thanks to the Chairman and directors terminated the proceedings.

FALCON CLIFF MINING COMPANY (ISLE OF MAN).

At the general annual meeting, held at the offices of the company, Colonial-buildings, Dale-street, Liverpool, on July 15, there were present—Messrs. W. R. CRITCHLEY (in the chair), Dr. R. F. Ainsworth, M.D., H. H. Hardman, T. B. Brown, E. W. Bird, Dr. Lupton, Wm. Bartlett, Dr. Ayrton, E. Harpin, J. Pilkington, Capt. C. B. Phillips, J. S. Gardner, A. Francis (of Rhyl, consulting engineer), and W. C. Bew, secretary. In opening the proceedings the CHAIRMAN said—

In meeting you here again at the close of another financial year, I think I may fairly ask you to join with me in mutual congratulations upon the very large amount of work done in developing the mine, and the very excellent prospects of success now before us. Bearing in mind the short period that our permanent works have been fairly in operation, and the fact that our engine and machinery have only been brought into full working order within the past year, I believe I am fully justified in saying that we have sunk a first-rate engine shaft about 35 fathoms deep, to have driven more than 200 fathoms of levels at various depths, opening out such ore ground for stoping as to justify us in having already begun to dress ore for market; and to have put up as good engine, machinery, and buildings as any that are to be found in the Isle of Man is to have placed the mine in a position which hardly any other mine has ever reached in so short a time. I went over with some of my brother directors a fortnight ago to see and judge for myself, and I can assure you that I could not possibly have been better pleasad with everything I saw. Since then I am happy to say a very important improvement has taken place in the 24, the particulars of which I will ask Mr. Bew to give you just now. If it is your pleasure we will take the reports and accounts as read, and I will now ask Dr. Ainsworth and Mr. Bird to propose and second the passing of them; and then if any shareholder has any question to ask the secretary, and Mr. Francis, who has kindly attended the meeting for the purpose, Capt. Barkell being unable to be spared from the mine just now, will be happy to answer them.

By Dr. AINSWORTH'S suggestion, the Secretary at this point stated that upon the 17th, subsequent to the directors' visit to the mine, Capt. Barkell had written as follows:—"We commenced cross-cutting in the 24 south first thing on Monday morning, as I thought the footwall of the ore-producing branch was only about 6 in. west of the level in the sole. I am glad to say it has improved in general character since we last saw it, and contains copper and blende. I will report more particularly by to-morrow's post, when it will be better laid open," and upon the 18th, "The 24 south has further improved, the branch being fully 18 in. thick, consisting of blende and copper, but not intermixed with each other. The ground surrounding it is very hard, and the branch also is exceedingly hard and tough (a good feature for permanance), therefore we cannot open out very rapidly southward. My firm conviction is that a further improvement will take place as we advance, because where we cut in is evidently close to the north end of the ore." That he had the pleasure, along with a shareholder now present, to personally inspect this newly-discovered run of ore upon the night of the 23rd, and found it had increased to at least 2 feet in thickness, with another course of ore overlying it, composed of blende and lead of about 11 in. in thickness, making at least 3 feet, and of a character much superior to any previously seen either in the 12 or 24 fm. levels, and evidently still improving.

Drs. AYRTON and LUPTON having asked several questions as to the accounts and working operations, which were replied to by Mr. Francis and the Secretary, Dr. AINSWORTH, M.D., in moving a resolution—that the accounts and reports be approved and passed—stated that it gave him great pleasure to be enabled to say that after a very careful examination of every part of the mine both on surface and underground, he felt bound to express his unqualified satisfaction with everything he had seen; he was much surprised to find such progress made, and that although the work had evidently been pushed on most vigorously every part of it bore the stamp of being most substantially and carefully executed, and he felt more than ever sanguine of speedy results rewarding the shareholders.

Mr. BIRD, in seconding the resolution, said: Having more than once visited the mine, I can fully endorse what the Chairman and Dr. Ainsworth have stated, I believe that in what has been done so far, there has been, humanly speaking, not a single omission or mistake of any importance, and that the most work has been done that could be done in the time, at the smallest possible cost, consistent with the true economy of doing everything thoroughly well, and to the best advantage for the future success of the mine. This is saying a great deal, but I venture to say it, not on my own judgment, but on that of competent practical men, who are best able to judge of such matters; and from all such men whom I have met I have heard but one opinion, which is that we have got one of the best properties in the Island, and are doing it thorough justice, and I must say we owe a very great deal of our satisfactory progress to our indefatigable secretary, Mr. Bew. In saying this I do not wish for one moment to detract from the services of Capt J. Barkell, who has excellent abilities, and is thoroughly conscientious and hard working, and to whom I would give all possible credit, but there are many occasions when the advise and assistance of a hard-headed third person are of the utmost value to a mine manager, and I am sure that if Capt. Barkell were here he would tell you that it has been of the utmost value to him to have Mr. Bew's constant watchful supervision of all that goes on, and his assistance in maintaining that strictness of order and discipline which is positively essential to the well being of the mine. So long as we pursue our present system of personally looking into the accounts and other matters as far as we can on this side the water, and sending our secretary over to meet the whole of the men, with the manager at the mines, on each monthly pay-day, and to assist him in keeping everything and everybody in the best order, so long shall we, I believe, get the most work done at the least cost, and with the most satisfaction to all concerned. The improvement of which Mr. Bew has told you comes most opportunely to confirm the opinion which we hold, that having now begun to dress ore, we need not fear being unable to keep up a regular and increasing supply for the future.

Messrs. Dawes and Bird having retired as directors were, upon the motion of Dr. Ainsworth and Mr. J. S. Gardner, re-elected—Dr. Ainsworth expressing himself very warmly as to the value of their services, and the pleasure and confidence he had in co-operating with them.

A cordial vote of thanks was, upon the motion of Dr. AYTON and Capt. PILKINGTON, L.R.B., accorded to the Chairman, directors, and officers.—Mr. CRITCHLEY and Mr. AINSWORTH responded, urging that great thanks were due the secretary (Mr. Francis) and Capt. Barkell for their unweared exertions, the CHAIRMAN expressing a hope that the shareholders would visit the mine and see for themselves its position; the monthly visits of the secretary being a favourable opportunity for those who chose to accompany them—Mr. FRANDIS and Mr. BEW (who paid a warm tribute to the value to him personally of Mr. Francis's advice and assistance at all times) having replied, the usual vote of thanks to the Chairman concluded the meeting.

PINTO SILVER MINING COMPANY.

The adjourned general meeting of shareholders was held at the City Terminus Hotel, Cannon-street, on Wednesday,

Mr. C. N. CRESSWELL in the chair.

Mr. F. G. WHITWHAM (the secretary) read the notice convening the meeting, the minutes of the meeting of which there was an adjournment, and the balance-sheet, showing 871*l*. 17s. 10d. cash in hand. The report, to which reference was made in last week's Journal, was taken as read.

The CHAIRMAN said that since he had last had the pleasure of, addressing them they had passed through alternate phases of hope confidence, delay, disquiet, gloom, and discouragement, yet their position was not so unsatisfactory as they had anticipated a month ago. Within the last 36 hours they had received a letter from Mr. Woodhouse, which he would read to them, and they would see that it confirmed the belief which the directors entertained with regard to the mines, and would convince them that, although more time had been required than they expected, and more money would be required, the facts encouraged them to believe that the property would ultimately fulfil their expectations. The letter to which he alluded was this—

"I arrived on the 5th inst., and wired you to know when we might expect to receive funds here, and how much? I have since had your two telegrams explaining matters, and these have been answered. It is of the utmost importance that funds be sent out at once, unless it is the general desire of the shareholders to shut down the works altogether, and so sacrifice what has already been expended. I cannot suppose such a course would be entertained, and judge from the telegrams that you are now considering Mr. Partridge's proposition to amalgamate the Basye and Pagecorwen with this property, and are raising sufficient funds on debentures to carry on the works. The bank debt has been running now some six months, and Mr. Paxton wishes it paid off, or at all events considerably reduced; he is willing to assist the company with short loans, but cannot lock money up for an indefinite period. As this advance was made at about 2 per cent. per month, there would be a considerable saving by raising on debentures in England, and paying off the loan. Had I been aware of the position of things here I should have sent Mr. Cresswell a very different code; as it is, the one you have is not applicable, and you must take the word "Nero" to mean that the indications in the tunnel are such as to lead us to expect the lode may be reached shortly, but not 'in a few days,' as the cypher would imply. On present workings in Maryland tunnel there is a small seam, or string of ore, of the same character with that found continuously in the mine to the depth of 250 ft., and this indication, small at first, has now widened to about 7 in. of ore, assaying $103 per ton. I am informed by mining experts here that in all their experience they have never met with an instance of a vein of ore holding down 250 ft., as this has done, and then entirely ceasing; and Prof. Keye and Mr. Cadwallader give it as their opinion that there is some displacement of the vein matter, and by following present indications we must find the lode again. The shaft on the Michigan is down 120 ft., and there appears to be plenty of ore at the bottom, averaging $70 per ton; it is very expensive raising ore this height, and to do it the whim must be moved from the Maryland; besides this the ore has to be hauled all the way down again to the mill, and therefore it might be desirable to run on the tunnel, and to stop work on this mine until connection is made. One great mistake has been in not providing enough working capital; but there is no ground for supposing that the property is not as good now as it was this time last year; on the contrary, an excellent mill has been built, a tunnel 900 ft. long opened and other work done; yet, because the "pay chimney," or lode, of the Maryland has not been struck at once, and no provision was made for such contingency, we are placed in the unpleasant position of having to raise funds to carry on necessary work. Another very serious error was in the estimate of ore on the dumps, and in this both Capt. Plater, and Powell the foreman, were to blame. So far as I can understand it, they appear to have based their calculations on the piles of ore around the mines, supposing them to be of an average value throughout; but in this they were much deceived, and subsequent investigation proved that a large quantity of what they thought good ore was of too low a grade to work with profit, running down to $20 per ton. I think, although Capt. Plater has made some errors, he has wished to act for the best, and he has certainly shown his confidence in the undertaking by furnishing his house with a view to making this a permanent home. There are other circumstances which are much in his favour, but which I prefer not to write about; anyhow, I am convinced of his integrity; it is hardly fair to judge of his ability by past results, but so far as the mill is concerned, I think the company has got very full value, and this in a great measure owing to Capt. Plater's supervision. He was, however, much to blame in not advising the true state of affairs here; but I suppose he hoped to come into the lode daily, and so put off letting us know the worst. For the future the plan of operations would seem to be to keep down expenses as much as possible on the mines, to amalgamate the Basye and Pagecorwen, and to work all the force we can on them; at present large quantities of rock and ore are being blasted down from the Basye, and the ore when collected will average $60 per ton. With a large force at work, enough ore could soon be got to start the mill, and keep it running; but under any circumstances the mill and site are a valuable property, and must soon be crowded with custom ore. The reason why this does not come in immediately is that locators about here are accumulating their ores on the dumps in hopes of selling their mines, but whether successful or not, these ores must eventually come to our mill, as it is the only one in the district. With regard to the two new settlers, it was evident from the heavy character of the Pinto ores, the five settlers in the original specification were insufficient, and that much waste occurred, this could only be found out by experience, and Capt. Plater would have ordered new settlers before, but did not like incurring the expense. I have hardly had time to get sufficient information to write you on many points; but I thought you might be anxious to hear, and so I would not delay longer. I shall hope to write again in a few days.—L. L. WOODHOUSE.

He would next allude to a topic upon which they required information. Mr. Woodhouse had explained what was meant by the ore giving out—a statement which they could not understand when they first received the report of it. Down to the depth of 250 ft. the vein had continued good, and had even improved. They went down to the depth of 300 ft, but found that although the vein continued the ore was not sufficiently rich to pay for carrying, while labour and other charges at the mine were at their present rate. They, therefore, upon the recommendation of mining experts acquainted with the district, determined to follow the course of the vein, and they had already a seam of 7 in. wide, and worth $103 per ton. The next clause of the report to which he would refer related to the question of capital. It was absolutely necessary that further capital (not a very large amount) should be raised; this must be procured upon the most favourable terms possible, but in the present position of the company the terms would, of necessity, be high; he thought, however, that he would be able to show them that the matter had been well considered. Before asking them to pass any resolution upon that subject, he hoped to be able to satisfy them that the directors were justified in asking for further capital. The shareholders would naturally enquire, considering the disappointments they had had, what Mr. Partridge intended to do in the matter. That question had been put to Mr. Partridge by the directors in a very categorical manner, and he had given an equally categorical reply. He would give up (upon certain terms which the meeting would acknowledge were favourable) the whole of his interest in the property which he had in the neighbourhood, and which its owners had purchased for 22,000*l*., to the company, and he would relinquish all the deferred shares standing in his name, which would be some 3000*l*. or 4000*l*. The importance of this was very great, as it would enable them to unify the shares, and obtain for them a regular quotation on the Stock Exchange. In the spirit of this offer the directors had entered into a provisional contract, but it would rest entirely with the shareholders to determine whether the purchase should be carried out. The property in which Mr. Partridge had a large interest was six or eight times the extent of their own, in reporting upon which Mr. Hill states—

THE BASYE MINES OF SECRET CANON.—The ground covered by the Basye Mines has the main ledge and vein of the hill—its course being north and south. On the large outcrop of the Leviathan ledge may be seen the course and connection of the smaller veins or feeders which form this great mass of mineral wealth. The croppings assay much better than most of the veins of Nevada, running from $15 to $90 per ton. The Comstock croppings average about $20 per ton. There is exposed ore ground sufficient to employ a large force of miners; and when shafts have been sunk on the vein to a depth of 100 feet, and the connection made by adits, a supply of ore may be counted on to the extent of from 30 to 50 tons per day, varying according to the disposition of the ore in quantity. Rich seams of ore, from which I have had assays of $530 in silver per ton, frequently occur, and will bring up the average product of the mine to a high degree. Once opened, the result from (say) 30 tons of ore per day would be fixing the assay at $100 per ton. Cost of mining $7: hauling $4; milling $35 = $46; 80 per cent. of $100 = $80. Net profit $32, or $960 per day; and for the working days—25 each month—a net monthly profit of $24,000, or 5000*l*. The product would depend largely on assorting the ore, but for working at the Pinto Mill it would be well to assort closely, reserving the lower grades of ore till a large mill was built. The Pinto works are perfect, and are ready for ore. At present the Basye prospects are second to none in the country. I have been connected as assistant superintendent of the Jesus Maria Mines at Neueva Leon and Veta Grande Mines, of Zacatecas, which are in limestone formation, similar to the mines of this country, and more recently engaged as assistant at the Ophir Mill, where we crushed and roasted ores, in the same manner as adopted by the Pinto Company, except that they (Pinto Company) have the advantage of the Stetefeldt furnace in roasting.

He did not intend to attach too much importance to the report, but it afforded some idea of the extent of the property. They had made arrangements to take possession of the property without paying any money, and they hoped that the shareholders would be satisfied with the terms. The whole of the purchase price is to be taken in Pinto paid-up shares, with the exception of 10,000*l*., payable to locators and others who have claims upon it; and even this 10,000*l*. is only to be paid out of realised profits. If the property offered were a valuable one, as the directors believed it to be, the offer was a liberal one, and would, doubtless, be turned to the advantage of the company. He concluded by formally moving that the report and accounts be received and adopted.—Mr. G. G. WELLS seconded the motion.

Mr. REEVE enquired how it happened that with regard to 100 of the shares held by Mr. Marsden, one of the directors, only 50*l*. had been paid? He could not understand how with money due to the company they should want to borrow money. He observed that the prospectus stated that no money would be paid or shares allotted to the vendors until the mine had been examined by someone sent out from this country, and would like to know whether it was so examined. He would like to know the exact amount of property netted by the vendors upon the sale of the property to the company, or how much was received by the promoters in this country.

Mr. SMITHERS thought it more necessary to know whether Mr. Partridge gave up the balance of the purchase-money which appeared in the accounts, and what security Paxton and Co. held of the company.

Mr. REDDING suggested that as the mill was in such a position that it could command a supply of ore, it might be well to work the mill on customs ore only.

The CHAIRMAN said that as to the 100 shares with only 50*l*. paid on them, to which Mr. Reeve had alluded, Mr. Marsden did not deny his legal liability upon those shares, but, although nominally standing in his name, they really did not belong to him. The account was, therefore, left open, but Mr. Marsden was responsible. The payment of the amount, however, would make no difference to the company, as the money would at once go to the vendors. Mr. Partridge had not returned the 5350*l*. which appeared in the accounts against his name, because he had never received it. It was a mere matter of account, the 100,000*l*. appeared in full on the one side, and the 5350*l*. on the other. The accounts were made up to April, since which Mr. Partridge had received 1250*l*.; but against that he had advanced 2500*l*. to the company. His interests were transferred to parties in this country, and it was to them that the payments were made. He could not answer Mr. Reeve's question as to the net profits realised by the vendors, nor how much was received by persons in this country out of that which Mr. Partridge had received, for it never occurred to him to ask a man what he did with his money; but he would make a statement which would, perhaps, give Mr. Reeve the information which he really wished to obtain. Not one of the directors so far he knew had received any of the moneys from the vendors or their representatives. With regard to the starting of the mill, he agreed with Mr. Redding that milling alone might be made a source of profit to the company; but this would be as a last resource, and he hoped they would not require to resort to it. They had considered it desirable not to start the mill until they could arrange to run it regularly, and at present they had not the means of starting it.

Dr. FAGAN suggested that the difficulties with regard to the snow in winter might recur next season.

The CHAIRMAN hoped not; but assuming that it did, it would not be accompanied by similar inconvenience, and their agents would have taken care to have plenty of ore conveyed from the mines to the mill. He continued, in reply to Mr. REEVE, that Mr. Woodhouse examined the property previous to the payment of the purchase price, and that in his examination he was assisted by Mr. Keye, Mr. Cadwallader, and others; and it was also examined for Mr. Belairs, and other independent shareholders. All the reports upon the property had appeared in the *Mining Journal*. The 4000*l*. in the accounts was for silver sold, and did not represent the year's produce of the mine. Large parcels of ore had been raised, and would have been reduced and sold if they could have got it down to the mill.

Mr. RUSSELL enquired whether the Chairman could give the meeting any idea of the mine produce, or the quantity of ore at the mine?—The CHAIRMAN said that both the quantity and quality of ore had been overstated from the beginning, but taking the estimate upon which the teamsters offered to carry the ore to the mill there was between 1300 and 1400 tons—one estimated it at 1300 and another at 1400, and at last an arrangement was made to carry it as 1300 tons. The ore was now assorted, and its estimated value was from $12,000 to $18,000. Some of the ore is worth $250 per ton, and the total charges, including mining, milling, and royalty to the Stetefeldt Company, was estimated at $45 per ton.

The report was then unanimously adopted, the directors were authorised to accept transfer of the Basye and Page and Corwin properties, and to raise further capital by creating 50,000*l*. debenture debt. Messrs. Bewick, Cresswell, and Gosset were re-elected directors, and Messrs. Ford and Smith auditors, the sum of twenty guineas being voted to the latter for past services.

The proceedings terminated with the usual complimentary vote of thanks to the Chairman.

TAQUARIL GOLD MINING COMPANY.

The annual general meeting of shareholders was held at the London Tavern, on Wednesday,

Mr. ROSS MANGLES (Deputy-Chairman) in the chair.

Mr. BLUETT (the secretary) read the notice convening the meeting. The report of the directors (which appeared in last week's Journal) was taken as read.

The CHAIRMAN said he had nothing whatever to add to the information communicated in the report. Shareholders and directors were brothers in misfortune—each had suffered disappointment. The returns had been very inadequate, but still the mine had shown that it did contain gold, and it might possibly—and probably, he thought—show better returns in future, if the shareholders continued to work it. It depended upon the shareholders whether they would raise more capital and further develope the mine, and also upon what basis that capital should be raised depended upon the will of the shareholders: in their hands, therefore, the directors left the matter, and desired to have their opinion upon the matter. Mr. Dawson, the managing director of the Don Pedro Company, was now in Brazil, and was expected home on Aug. 16. Mr. Dawson had visited Taquaril, and would give some report upon it.

The CHAIRMAN moved that the report and balance-sheet be received and adopted.—Mr. WILDE seconded the proposition.

Mr. BARTLETT would like to know between whom the item of 1701*l*. for London expenses was divided?—The SECRETARY said the directors received 750*l*., which was regulated by the Articles of Association.

Mr. BARTLETT wished to know the other items.

The SECRETARY said the salary of the secretary was 400*l*. per year; auditors, 26*l*. 5s.; rent, 58*l*.; sundries, 8*l*. 18s. 5d.; printing and stationery, 163*l*. 2s.; law expenses, 60*l*. 12s. 8d.; general charges, 154*l*., including postage, &c.

A SHAREHOLDER considered such charges as perfectly monstrous.

Mr. WADDINGTON could not understand how any body of gentlemen could take as their remuneration the sum of 750*l*. out of such a miserable concern as Taquaril, the more especially as there was not a single member of the board who knew anything of mining.

The CHAIRMAN said that he had had the highest expectations of the mine, and had himself bought shares long after the company was formed, and long after he joined the board, believing it to be an excellent thing. It was very easy to be wise after the event, and to call it a miserable undertaking; but if the gentleman who made use of that term thought so at the time it was not easy to account for the fact that he did not dispose of the shares when they commanded a high premium.

Mr. BARTLETT said that the directors, whether they be the original directors or not, were to blame for taking that sum in the unfortunate condition of the company.

The CHAIRMAN said that from week to week and from day to day they had been hoping and expecting favourable reports.

Lieut.-Gen. DOWNING said the remuneration was fixed not by the present directors, but by those who framed the Articles of Association.

Mr. GREY suggested that before any more capital were raised the present articles should be abolished; the mine had not only never yielded profits, but had swallowed up a large amount of capital. The money had been drawn from people who could very ill-afford to pay.

Mr. J. M. SMITH said that the proposition made by Mr. Waddington at the last meeting, that an independent inspection of the mine should be made, was opposed by Mr. Haymen, the Chairman—a fact which he (Mr. Smith) could never understand. Upon the suggestion of the Chairman, the secretary read the resolution passed at the last meeting, that a disinterested mining engineer should be engaged to inspect the mine and report thereon, in favour of which 13 shareholders voted, and 32 against.

The CHAIRMAN said that the board had appointed Mr. Martin, having satisfied themselves of his ability; they appointed Mr. Martin in the hope that he would be able to bring the mine into a prosperous condition. They were brothers in misfortune, and he did not see they would gain anything by roaring at and abusing one another. The only way to get out of the mud was to combine, and put their shoulders to the wheel, or determine to wind-up the affair. He did not know what interest his brother directors held, but personally he should be a considerable loser if the company were wound-up, but he desired to take his losses as a wise man with good nature and in perfect good humour.

Mr. BARTLETT said if they were to raise new capital they must have an entirely new administration.

The CHAIRMAN said the directors were not prophets, and could not tell at the beginning what results would be realised. They were in hopes from time to time that success would be attained, and that their salaries would have been fairly earned; and if the shareholders should determine to go on, he was quite willing to work for nothing.

Lieut.-General DOWNING said that he was induced to join the board upon the belief that the mine was a right good thing; and, for a long time, they believed it would pay handsomely. The shares advanced to 2*l*. premium, but he never sold a share; he had lost his money, and he hoped he would lose it without grumbling. If the mine were to be continued important reductions would have to be made, and he was sure that each member of that board would be satisfied with any remuneration the meeting might vote.

Mr. ROWSELL certainly thought that when it was found the mine to all appearances was likely to be a failure the first thing the directors should have done was at least to have reduced their remuneration one-half. Had he (Mr. Rowsell) been a director he should have been inclined to have given up remuneration altogether. He supposed the directors had formed some definite opinion as to the best course to be adopted. He agreed with the suggestion of an hon. proprietor that a small committee of shareholders should be appointed to confer with the directors as to the real position of the company. If such a committee should come to one conclusion that the prospects were such as to justify the shareholders going on he had no doubt the needful capital would be forthcoming.

The CHAIRMAN said that the Don Pedro Company returned for two years dividends at the rate of 100 per cent. per annum, and these other mines might have been equally successful. The board were perfectly willing that a committee of shareholders should be appointed to confer with the directors as to the course to be taken, but he thought it would be better to defer any action until Mr. Dawson's return, as he would probably be able to give some valuable information. He might mention that they had between 3000*l*. and 4000*l*. in hand, which was sufficient to meet all their obligations. As he had already said, the board was quite willing that a committee of shareholders should meet them, although they had very little to tell them until Mr. Dawson's return.

Mr. ROWSELL thought the committee should have power to look into the past.

The CHAIRMAN said it would bring the present discussion to a practical issue if the meeting were to appoint a committee to confer with the directors.

Mr. ROWSELL begged to move that a committee of five shareholders be appointed to examine into the condition of the company, and to report thereon: the committee to have access to all books and papers, deferring any further action till the return of Mr. Dawson. He presumed that if a committee were appointed the directors would tell them anything they knew about the company.

The CHAIRMAN rejoiced that a committee was about to be appointed, and assured the meeting that the board would afford every facility or carrying out any inves-

gation they might desire.—After some further discussion, it was agreed that a committee should be appointed. The meeting was adjourned till August 28.

THE BRONFLOYD COMPANY.

The half-yearly general meeting of shareholders was held at the company's mine, on Tuesday, July 30,

Lieut.-Col. the Hon. C. S. VEREKER in the chair.

There was a large attendance, representing in the aggregate 18,023*l.* consolidated stock. The notice of the meeting and the minutes of the last meeting having been read, the balance-sheet for the half-year, to June 30, was submitted:—

General Balance-sheet for the Half-year ending June 30.

RECEIPTS.

To lead ore sold up to Dec. 31, 1871		£65,112	18 1
To interest received to same date		332	9 3
(As per last statement)		£65,445	7 4
To interest since received		48	5 2
Total		£65,493	12 6
To loan account—Bankers	£810 11 2		
" —Managing director	750 0 0 =	1,560	11 2
Total		£67,054	3 8
By expenditure, dividends, &c., as per statement to December 31, 1871		£64,038	3 10

EXPENDITURE, 1872.

By working cost, merchants' bills, &c.	£1384 1 2		
By sundry trade charges	67 19 0		
By income tax, discount on ore bills, &c.	105 9 5		
By royalty	200 0 0		
By directorate	100 0 0 =	1,857	9 7

DIVIDENDS, 1872.

By January—Thirty-third dividend	1000	0 0
By balance carried down	158	10 3
Total	£67,054	3 8

June 30.—Estimated Assets and Liabilities of the Company.

ASSETS.

Balance of capital	£	202 18 4
Balance of revenue		158 10 3
Reserves of ore, estimated at		50,000 0 0
The mine and its machinery		" " "

LIABILITIES.

Cost-sheet, May (since paid)	£	416 10 1
On balance of machinery, carriage account, &c.		430 0 0
Royalty		118 1 9
Loan account		1560 11 2

The register of members having been sealed, the CHAIRMAN said it was apparent from the balance-sheet that no dividend could be paid; no ore, in fact, had been delivered from the mine but that which was credited in the balance-sheet to Dec. 31. The managing director will, doubtless, have to explain the causes, and he (the chairman), only desired to add that as the new machineay, and the re-constructed and enlarged floors, have been thoroughly completed—with the efficiency of which everyone is highly satisfied—the directors thought it wise to employ Captain Thos. Glanville (reputed to be a mining engineer of great experience) to inspect and report on the underground workings, so as to secure an independent and faithful report at this particular juncture. He added that the report was most favourable, and it would be printed for distribution.

Mr. BALCOMBE said the members were told in April that the accident to the crusher-shaft, and the damage caused by the fall of the driving-wheel into the 40 ft. wheel pit (whereby some of the arms and sedgments of the iron water-wheel were broken on Dec. 31), had proved more serious, by loss of time, than was at first expected. This accident came, as most accidents do, at a very inopportune time; and the great changes made on the floors of the mine during 1870 and 1871, would make it evident to all, that frequent hindrances must occur in the dressing of the ore with regularity; and, for the 12 months preceding the accident the ore delivery account, by reason of this transition state, was gradually becoming more and more behind, and at Christmas the company owed 180 tons of lead ore, partly raised and not dressed. The accident upset all calculations, causing entire cessation of dressing, and the remaining portion of the half-year had been consumed in picking up arrears. Those who have visited the mine have seen how efficiently the dressing operations are conducted, and how all manual labour is superseded, or, at any rate, reduced to a minimum. It is no small compliment for a man of Captain Glanville's experience to pronounce on their economy in the way he has done in his report; yet an amount of work has been necessary which the men here will hardly appreciate without some further detail. The foreman has, therefore, taken out these figures:—The ground cut and removed to form the galleries has been 13,737 cubic yards; there has been erected 4830 yards of stone walls; 2192 yards of brick walls; 490 yards of slate roofing; 353 yards of galvanised-iron roofing; 148 yards of slate roofing; a brook culvert constructed in stone 147 yards long, and 59 yards of paving for the same; a new water-leat has been made 289 fms. long, in addition to new roads and approaches.

Mr. BALCOMBE said that such a change could not be effected without great disturbance: it is very like taking the roof off one's house, and then expecting to reside therein with equal comfort and security; therefore, the members can well understand the vexation at having these ordinary disturbances increased by an accident just as the work was finished, and when we might calculate on a greater output of ore, and a quicker and more reliable mode of dressing it. The proof of their having raised, dressed, and delivered the 180 tons, so that the ore account starts clear, speaks favourably for the future of the mine; and, in submitting the agents' and Capt. Granville's report, he could only add that he would be happy to answer any questions.

July 23.—Pursuant to instructions from the directors, I paid a visit of inspection to the above mine, and subjoined I beg to hand you my report. It is situated in the Erân Valley, about six miles from Aberystwith, in one of those rich mineral circles for which that well-known district of the Principality is distinguished. This mine possesses at surface immense capabilities for economical working, and its development, so far, evidences the most marked and reliable indications of extensive deposits of silver-lead ore. Its position proximately west of Great Cwmsymlog (East Darren) strengthens this conclusion, although Bronfloyd is independent of, and does not need any collateral evidence to prove its great value. The Bronfloyd sett is held under two grants, one from Sir Pryse Pryse, of Gogerddan, and the other from the Ecclesiastical Commissioners, each at a royalty of 1-14th of the mineral sold. Of these grants, fully 20 years are unexpired.

The workings date back for more than a century, and it is evident from the debris, or waste, that large returns of lead were then made by shallow operations. These were commenced in March, 1852, and have been continuous. Considerable profits have been realised, and a fine mine opened up; and here it may be remarked that owing to the economical management and system of working adopted, and steadily adhered to, the money returns on the quantity of silver-lead ore raised is on a higher scale than is exhibited by any other mine in Wales. The sum total figures at 65,112*l.* 18*s.* A junction of several lodes occurs at about the central point of operations, and two, if not three, large lode courses, beautifully defined, and considered the champion lodes of the county, run east to west through the united property which forms the sett, a length of somewhat over 1000 yards (500 fathoms); and it is my opinion they will be found to be freighted with ore. Four shafts have been sunk; Nos. 1 and 2 respectively to depths of 36 and 52 fms., both on the south lode. No. 3 is down 101 fms. on the north or main lode; and No. 4 is about 15 fms. deep, and so placed as to catch this lode on its underlie at about 43 fathoms from surface.

The mine is unwatered by a cross-cut adit driven in from the northern side of the hill, intersecting the north lode, and proceeding south until it meets shaft No. 2 and its workings on the south lode, at 28 fms. from surface; this lode proved very rich down to the 40, and from it the proprietors derived their earliest dividends, but at this point (40) an obstruction may be said to have gradually begun to develope itself, for, in sinking from it to the 52 a barren piece of ground intervened, and in the end a long level was perseveringly driven from the 40, bearing north-west, which resulted in the discovery of the north or main lode. The continuation of this level on the run of this lode, and to come under the No. 4 shaft, has at present been opened 175 fms. This lode, proving on its intersection to be very rich, another level was driven from the 52 of No. 2 shaft; and, at the same time, the upper sections of the lode tested by rises and levels up to surface; the lode is from 6 to 8 fms. wide, and rich up to the 17 fathom level: and it has so continued, with various produce, down to the present bottom level, 96 fms from surface. Owing to the riches of this main lode a new shaft was started from surface in 1865, so placed as to come down perpendicularly and meet the lode at 62 fms. deep. This shaft is now sunk, as before stated, 101 fms. from surface. The 96 is only as yee opened 3 fms. west on the south part of the lode, and is producing an admixturt of lead ore. The 84 is driven west of shaft 26 fms. The 73 is driven west 30 fms., east 6 fms. The 62 is driven west 28 fms., east 10 fms. The 52 extends 27 fms. west, 62 fms. east. The 40 reaches 120 fms. west, and 71 fms. east. From the 84, at about 3 fms. west of main shaft, a cross-cut has been opened south about 16 fathoms, for the purpose of intersecting, at this depth, all the lodes in the southern limits of the sett. In the 84 west, 73 west, and 62 east the men are stoping down the lode; upon the completion of which work the ends will be resumed throughout the mine. At those points the lode, for 3 fms. in width, yields the present returns of ore.

One of the most notable features of the Bronfloyd Mine is the abundance of water available for the machinery, which, I am bound to say, is of the very best and most effective description:—the economical arrangements for dressing the ore, and the construction of the floors, &c., form a combination of appliances certainly the most admirable I have ever seen. To enter more into detail of description, the stuff is all drawn to surface through the No. 3 shaft, and is passed down a tramway incline, 198 yards in length, to the spalling-floors:—this incline being worked by a large drum and wire-rope. Adjoining the spalling-floor is a 24-ft. water-wheel, working one of Blake's large-sized stone-breakers. The next floor, which is 20 ft. lower, has two powerful crushers, worked by a most excellent iron water-wheel (40 ft. × 4 ft.), which self-feeds numerous patent jiggers. The buddle and slime-pit floors are well formed, and being laid out in galleries effect the manipulation of the produce with great economy and perfect security. One very large classifier (36 ft. × 6 ft.) separates the chief deposits of slime ore, and this, in its turn, self-feeds the round buddles.

Besides the water-wheels already named, there are four others, respectively 32 ft., 24 ft., 12 ft., and 9 ft. each, which complete the drawing and dressing power of the mine. There is also a 16-horse power steam-engine erected, and kept solely for auxiliary use in severe and exceptional seasons. The machinery of the mine will, in my opinion, be capable of dressing 200 tons of lead ore per month. There is a wire tramway, 980 yards in length, for the conveyance of dressed ore; the working of this is very satisfactory, and must prove economical as against land carriage of ore up a most severe rise of ground from the mine works.

To sum up the present state and prospects of this property in a few words, I feel justified in saying—that estimating the fact that the mine is now only about 100 fms. from surface: that the shafts, both in comparison with the large extent of ground and their respective depths, are only in the initiative; that the levels, however profitable they may have been, or are capable of being, are in the same ratio only partially carried out; that the ore in sight, forming the large reserves, suggest that every means should be brought to bear on their further development, and augmentation; and that its mineral resources, which I consider of exceptional magnitude, should therefore be vigorously wrought upon at extended points. The trial being made from the 84, known as Balcombe's cross-cut, is a very fine one; and, having the same ends in view, although more eastward, I strongly advise that a cross-cut be put out from the 52 south from the No. 2 shaft, to test whether there are not other lodes in that direction. Finally, it only remains to add, as my deliberate opinion, that if the present workings are continued, and the above suggestion acted upon, there will be, prospectively considered, few among all the British mines found to surpass the Bronfloyd property.—THOMAS GLANVILLE, Mining Engineer.

After a lengthened discussion, and the expression of the necessity of extending the levels of the mine beyond the deposit of this wonderful shoot of ore, the CHAIRMAN moved that the balance-sheet and reports be received, adopted, and passed.—Carried unanimously.

A most cordial vote of thanks was accorded to the managing director, and suitably acknowledged—Mr. BALCOMBE remarking that although the suspension of these two dividends may result in disappointment to many, and is a serious loss of income to him, yet he could only urge the proprietary not to be frightened out of their shares at the instance of the advertising dealers, who do not possess a single share, but are obliged to borrow to complete the sales resulting in consequence. Not a single transfer of stock has yet passed under 80*l.* (2*l.* per share), and the replies of the parties who advertise them is one tissue of excuses, such as "My client has suddenly gone out of town, and until his return we cannot supply them." [Mr. RAMSDALE: Word for word what they told me.] [ANOTHER MEMBER: And so they did me.] Well, that ought to open your eyes to the falsely depreciating style of these advertisements. They are condemned by everyone. And all I can say in conclusion, after this long meeting, is no one who sees the mine, or has the mine inspected by a respectable agent, will be likely to fall into the trap these men create. An order of inspection has only to be written for to be granted by me to "One and All."

Capt. DAVIS: Bronfloyd is so good a mine that no one yet knows its value, but I will pronounce it to be the best mine in Cardiganshire. It possesses three main lodes, one of which only is worked for less than 40 fms. in length upon this wonderful shoot of ore, which is 10 fms. wide, while we have 487 fms. in run of its course within the sett. The trials we are making by cross-cuts may at any moment expose other equally good shoots of ore; and he must say that the excellent machinery they now possess will prove to be the salvation of the future of the mine, for with the old appliances it would be impossible, at a profit, to dress up the second-class ore, or south part of the lode. The rich ore is standing whole for 8 fms. below the 73, and it is entirely untouched from the 96 up to the 84, and the reserves stated in the balance-sheet will be fully covered by this ground, to say nothing of the south part of the lode, which is standing whole in all the upper levels.

Mr. WILLIAMS (Corris): I have seen many mines, but never one with such a scarcity of labour about—the machinery is self-feeding, and the hands saved.

Votes of thanks to the Chairman and the agent closed the proceedings.

ROOKHOPE VALLEY MINING COMPANY.

The statutory meeting of shareholders was held at the offices, Austinfriars, on Tuesday,—Mr. W. GREAME in the chair.

The LONDON MANAGER read the notice convening the meeting.

The CHAIRMAN said this meeting was held *pro forma*, in compliance with the provisions of the Companies Act, which rendered it obligatory on directors to convene the shareholders together within four months of registration. This company had been at work only three months, but the directors thought it would better suit the convenience of all parties associated with the enterprise to hold the meeting now, rather than defer it to a later period. Capt. Rogers, who had been appointed manager, was present to answer any question; he had thoroughly dialled the property, and had made a plan of the workings of No. 1 Stottsfield Burn, and his report upon the mine was most satisfactory. The directors were much pleased with what Captain Rogers had done, and the mine was opening out in a most favourable manner. There was no doubt a great deal of tutwork had to be done, for the mine had never been thoroughly opened out. Therefore, some little time must necessarily elapse before the mine could be brought into that efficient and miner-like condition which they could wish; but satisfactory progress was being made, and there was no doubt that they would shortly come into a highly profitable condition. It is intended to drive the two levels (15 and 25) to the boundary, a distance yet of about 60 fms. in that direction; to sink the present engine-shaft for two more levels, and to drive on the lode at these points both east and west, when it is fully anticipated, from the rich ore ground seen at the bottom of the 25, largely increased returns may be expected. Captain Arthur Waters, the manager of Tankerville and Roman Gravels, again visited the mine in the course of last week, and his letter, together with Capt. Rogers' report, he would now ask Mr. Murchison to read.

Mr. MURCHISON read the letter, as follows:—

July 25.—I have just returned from the Rookhope Mines, where the prospects are of the most encouraging kind. There is a very fine loking lode in middle level end, a good strong, orey lode, which is improving as the end approaches the hill. There is also a good lode in bottom end, and every sign of rich ground overhead as you go along. You must remember that the said level is being driven east on the top of the shale bed, the productive ground being above and below the shale, the latter being some 2 ft. or 2 ft. 6 in. thick. This level is opening rich stoping ground, I can assure you. The stopes in back of bottom level, 25 fms. behind the end, are in a wide, rich lode, from which large quantities of stuff can be had. It is clear to me that this mine improves in depth, and that the next level will be much richer than the 15 or 25. I don't exactly understand what is called Golden's lode. The level being driven on it keeps a course parallel to the level on main lode, making me believe that there is really only one great master lode yet seen—*i.e.*, one level on the hanging side, and the other on the footwall side of the vein. I am glad to see the two ends opening up new ground in the way they are, and that there is a prospect of a good mine under vigorous working, &c.—ARTHUR WATERS.

The report of Capts. Rogers and Brown was as follows:—

July 27.—We beg to hand you our report for the general meeting.—No. 1 Mine: Great Red Lode: The engine-shaft has been sunk 31 fms. from surface, and two levels driven east and north 10 fms. This was done for a fork to contain water, so that there should be no hindrance to the workings above. At this point we have cut a plat, fixed the necessary timber to make the ground secure, and a penthouse is now being put in. We expect to be in order to commence sinking the shaft on the 31st inst. The 25 has been driven east 8 fms. 3 ft. 6 in. since the present company commenced operations. The portion of the lode carried is 6 ft. wide, composed of soft fluor spar, coal shale, and a little mundic, interspersed with lead ore throughout, yielding of the latter 25 cwts. per fathom. The lode in the end at the present time will yield 30 cwts. per fathom; price for driving 3*l.* 10*s.* per fm. In the back of this level we have put up a rise and made a communication with the level above. This has laid open a valuable piece of ore ground. The lode passed through in this rise will yield on an average 1½ ton of lead ore per fathom. The stope west of this rise has improved, and will yield 3 tons of lead ore per fathom. The 15 has been driven east 18 fms. 4 ft. 6 in. since the present company commenced operations. The part of the lode carried is 4 ft. wide, and will yield on an average 15 cwts. of lead ore per fathom. The part of the lode still standing north of the level is very hard for exploring, consequently but little has been done to prove it. We intend to commence taking down this part of the lode next week, and prove it to the north wall, so as to ascertain the value of the lode to its full width.—Golden's Lode: The 20 has been driven west 7 fms. 5 ft. 6 in. Some part of the lode passed through for this distance proved very rich, and yielded 4 tons of lead ore per fm.; the lode in the end at the present will yield 10 cwt. of lead ore per fm., with signs of improvement. A rise has been put up 10 ft. in the back of this level to prove the lode, which was found unproductive. At surface we have built a coal-yard, and fixed a drop buddle on the dressing-floors to dress the slime ore. At No. 3 mine we have removed all the old wheel-pit, made additional excavations for the new one, and built the walls of the new wheel pit 7 ft. high, having a good staff of masons engaged in the building. I expect the pitch pine timber for arms for the new water-wheel will be on the mine in a day or two. With regard to the future prospects of the mine, we consider they are highly encouraging, judging from the extent of ore ground driven through in the two levels at No. 1 mine: the vast amount of lead ore extracted from these shallow workings, and the usual productiveness of lodes in the strata below the bottom of the engine-shaft, there is every reason to expect the lode to be highly productive below the present bottom of the mine, and seeing we have 60 fms. to drive the 25 fm. level before we reach the boundary of the sett, the prospects of this mine alone are of no mean order. The prospects of No. 2 and No. 3 mines may be inferred from the amount of mineral wealth they have already produced, which have enriched different persons, notwithstanding the limited scale on which they had been wrought, and the congenial strata through which the lodes pass below and beyond the old workings. In conclusion, we would observe that when the shafts are sunk, levels driven, the mines laid open and in full operation, it is our opinion that they will become a great and permanent dividend-paying property.—E. ROGERS, D. BROWN.

Capt. ROGERS (the manager), in reply to questions, stated that in the No. 1 Mine two levels had been driven 190 fms., the lode throughout good ore, and being in places worth from 7 to 8 tons per fathom, and there were yet some 60 fms. to drive before reaching the boundary, there being in the bottom level about 50 fathoms of backs. Ground was being opened out for stoping.

Mr. PETER WATSON (a director) drew attention to the fact that the characteristics of the mine were precisely analogous to the Beaumont and the other neighbouring rich mines.

Capt. ROGERS said that there were only two mines in the two counties that had been sunk through the hard stratum below which the lode was found productive.

Mr. WILLIAMSON asked if there were ample capital to fully develope the mine?

The CHAIRMAN said they had something like 15,000*l.* at the bankers.

Mr. MURCHISON mentioned that ore to the value of 1350*l.* had been sold since the company commenced operations, about two months since. It should be borne in mind that, although the lode was being carried for 6 ft., its actual width was 24 ft.——Mr. WILLIAMSON asked how long it would be before regular monthly returns were made?——The CHAIRMAN said that regular monthly returns would be made at once, and they would return 30 tons per month to begin with; but the dressing-floors required to be enlarged, and there was a large amount of tutwork to be done.

Mr. J. J. PYNE said there were very large quantities of ore that could not yet be treated for want of adequate dressing-floors.

Mr. WILLIAMSON asked if all the favourable anticipations formed were likely to be borne out by results?——The CHAIRMAN said that certainly nothing had occurred to alter those favourable opinions; on the contrary, everything tended to confirm them.

Mr. PYNE believed that some portion of the property had been worked for iron.

Mr. YORK (a director) said that No. 3 mine had been worked for iron, and that the question of the re-development of that portion of their property for that metal would have to be considered. They possessed powers under their leases to mine for iron.

Mr. COOKE asked the amount of the monthly costs?——Mr. MURCHISON said the last month's cost was 400*l.*, which included the purchase of a large amount of timber. The cash assets amounted to 15,300*l.*, and the liabilities to 660*l.*, including the last month's costs.

Mr. PETER WATSON said it was not a question of getting ore out of the mine but of enlarging the dressing-floors. If they had dressing-floors capable of returning it, 60 or 70 tons per month could already be easily extracted. Some little time would be necessary to place the mine in proper working order. It was in precisely the same condition as Tankerville was two and a half years since: and, the ground being so much easier in Rookhope, 4 or 5 fathoms could be developed to 1 fathom in either Tankerville or Roman Gravels.

Captain ROGERS, in reply to a question, stated that he estimated it would cost about 1000*l.* to enlarge the dressing-floors.

Mr. P. WATSON said shareholders should recollect that the company possessed three mines, but that at present they were only developing and obtaining ore from one. The directors had personally visited the mines more than once, and they showed their confidence in the value of their property by holding a very considerable interest; the directors and officers of the company holding no less than 7000 or 8000 of the 15,000 shares into which the company is divided.

A SHAREHOLDER asked the cause of the depreciation in the market value of the shares?——The CHAIRMAN said it was impossible to say; there was no more cause than when Tankerville shares were knocked down to 12*l.* last year, when the mine itself never looked better.

Mr. PETER WATSON said the directors of this mine were the same as Tankerville and Roman Gravels.

Mr. COOKE said that Captain Waters had stated that Rookhope was in the same condition as Tankerville and Roman Gravels when he took the management, it would be useless to force returns until the mines had been opened out.

The CHAIRMAN said that during the next 12 months returns would be made and profits realised. From several conversations he had had with Capt. Waters, from what he had seen himself, and from Capt. Rogers' reports, he was perfectly satisfied that in Rookhope they possessed a really valuable property.

Mr. PYNE urged the desirability of mining for iron, the price of that metal being so high.

Mr. YORK said there was a mineral line of railway that had been constructed expresely for the transit of the iron, so that the ironstone could be taken away at a very small cost.

Capt. ROGERS, in reply to a queston stated that it would take about six months to complete the water-wheel at No. 3 mine, and three months to fork the water.

A vote of thanks to the Chairman and directors was passed.

The CHAIRMAN having appropriately acknowledged the vote, expressed a hope that at the annual meeting they would be able to submit something of a more definite character, and perhaps before that give the shareholders a really substantial evidence of the success attained. (Hear, hear.)

The proceedings then terminated.

REAFADDA COPPER MINING COMPANY.

The first annual general meeting of shareholders was held at the offices of the company, Pall Mall, Manchester, on Friday, July 26,

Mr. JOHN CASH in the chair.

The SECRETARY read the notice convening the meeting.

The CHAIRMAN called upon the secretary (Mr. J. R. Aldred) to read the directors' report, which was as follows:—

At this our first annual meeting, held in compliance with the Companies Acts, 12 months after the incorporation of the company, we have but little to add to the elaborate report we presented to you at the meeting held in December last. The very wet weather so prevalent during the spring, and to a late period, greatly retarded mining operations, and prevented our continuing the workings at the Anglesey Mine, until a new shaft was sunk, and machinery erected to keep the mine free from water. Mining operations have been chiefly confined to the Holyford Mine, near the south boundary of the sett: the sinking of the new shaft there has also been retarded by the unusual wetness of the season, and only recently resumed—it is now sunk about 20 fms.; at 16 fms., levels were driven from it, on the north and south lode, for a few fathoms in each direction, until the water so filled them and the shaft that they were compelled to discontinue the workings in those levels, which have not yet been resumed. It was considered better to drive from the end of the deep adit of the old mine a level to the east, to come under the new shaft, and so relieve it from the water. It was then discovered the deep adit was some fathoms to the west of the north and south lode, and for a considerable length—say, 40 to 50 fms.—from the point where it was lost in the old mine. This level was commenced driving on the east and west lode, which in about 2 or 3 feet was heaved out of its course by a bar of hard ground; the driving was continued in the same direction to cut through the north and south lode, which was accomplished, relieving the new shaft of the large quantity of water, enabling the men to resume sinking it. In the driving of this north and south lode to the south it is found to be greatly improved, and is 2 ft. 6 in. wide, producing good stones of ore; and, as seen in the new shaft, with two well-defined walls, it possesses the same appearances as it bore in the old mine, when bearing the large body of ore that was got by the original company in the second year of their working upon it, when they obtained upwards of 16,000*l.* worth of ores, of the high percentage of 24½, from it at the deep adit near the engine-shaft up to the surface. The water, in the present driving to the south being so very strong is proof that a body of ore is near at hand, the green carbonates of the surrounding strata confirming that opinion. The captain, in his last report, speaks of this lode in the highest terms, and says that it contains all that can be desired to be seen in a lode likely to yield a course of ore. There are small strings of copper through the entire length of the shaft, which appear to be dropping into the main part of the lode. These are about 50 fms. south from the new shaft of this lode, which has never been seen yet, so that we think you have here a very promising piece of ground to work upon. The workings set upon tribute, as mentioned in our last report, though the ores were dressed up to a high produce, were found not to pay, consequently they were discontinued. The small parcel of ore sold at Swansea in February last realised 11*l.* 15*s.* per ton, but which at the present high standard is worth 15*l.* per ton. We have every expectation of being able to have a pretty large quantity of ore to sell at the end of the present quarter. In submitting the statement of accounts to you, you will observe a sum obtained as a loan to the company to continue the working of the mine, this having been advanced by the directors, who also largely subscribed to the original share capital. They must now look to the other shareholders to bring in further capital, by taking a portion of the unappropriated shares, and recommending them to their friends and connections. The present appearance of the workings holds out such favourable indications of the mine becoming not only self-supporting but dividend-paying, that there cannot be a much safer mining investment. The shares have been sold at a premium, and there is every probability they will soon bear a high premium when placed on the market.

The above report, after being duly proposed and seconded, was carried unanimously, and the annual statement of the accounts agreed to.

The following gentlemen, who retire by rotation, were re-elected directors:—Mr. William Aldred, and Mr. Edward Newton Carr.

Mr. Stockwell was appointed auditor for the ensuing year.

It was further resolved that the 1400 unappropriated shares be offered to the public at par, bearing a preferential dividend of 10 per cent. for five years, and the present shareholders to have priority of allotment.

The meeting then terminated with a vote of thanks to the Chairman.

PENHALLS MINING COMPANY.

At a quarterly meeting of adventurers, held on July 26, the financial statement was presented for twelve weeks, and showed a profit of 948*l.* 13*s.* 3*d.*, and a credit balance of 1795*l.* 11*s.* 11*d.* A dividend of 1000*l.* (4*s.* per share) was declared. The agents' report, which was considered highly satisfactory, was as follows:—

July 24.—The following is our report on the progress made in the various points during the past 12 weeks:—At the 70, west of the engine-shaft, a rise has been put up on the cross-course, and holed to the 60 fm. level cross-cut north, for the purpose of ventilating both levels. The 70 west end has been driven on the lode some 3 to 4 fathoms; the lode here, although tinny, is not of much value. A stope in the bottom of this level is worth 15*l.* per fathom. We hope this bunch of tin will continue down on the gossan (some 7 fathoms below this level). Another stope in the back is worth 8*l.* per fathom. The 60 fm. level cross-cut north has been further extended 10 fathoms and crossed a large gossan, supposed to be the same one which is the rise at the 80. The 54 fm. level west end is worth about 8*l.* per fathom, and a stope above this level 10*l.* per fathom. The 50 fm. level end, west of great cross-course, continues hard near the gossan on which we are driving, and is worth 7*l.* per fathom; a rise above this level is worth 10*l.* per fathom. In the eastern part of the mine, at the 50, the lode is not yet found beyond the cross-course. The stopes in the back of this level are respectively worth 10*l.*, 14*l.*, and 20*l.* per fathom. In the 44 fm. level end east the Pink lode is 6 feet wide, somewhat hard, and worth 6*l.* per fathom. The 40 fm. level cross cut north, on the great west cross-course, has not yet intersected the lode, but we are daily expecting it, as very good tinstuff is making its appearance both in the cross-course and in the numerous branches near it. The lode in the rise in the back of the 50, immediately under this ground, being of a most promising character, and almost entire to the adit west of this point, we look on this as one of the most important points in the mine. In the 30 fm. level north, east of the flat-rod shaft, a portion of the north lode has been cut through, found worth 8*l.* to 10*l.* per fathom, and has partially drained one of the old bottoms in the level over. A rise is now being put up at that point, so as to effect a communication between the 30 and 20 as soon as possible; this done a good piece of tin ground will become available. At the Shop shaft the 45 west is worth 8*l.* per fathom, and the rise over this level 9*l.* per fathom. At Sarah's shaft the various stopes are worth in the 17 west 7*l.*, 9*l.*, and 8*l.* per fathom respectively, and in the 14 east 9*l.* per fm. The tribute pitches have not fluctuated much in value since last general meeting, nor have the tutwork points much on an average, and the results of the 12 weeks' operation is much the same as that of the preceding quarter (or 13 weeks).—8. BENNETTS, W. HIGGINS.

[For remainder of Meetings see to-day's Journal.]

CORNISH PUMPING ENGINES.—The number of pumping-engines reported for June is 20. They have consumed 2663 tons of coal, and lifted 16·3 million tons of water 10 fms. high. The average duty of the whole is, therefore, 53,300,000 lbs., lifted 1 ft. high, by the consumption of 112 lbs. of coal. The following engines have exceeded the average duty:—

Chiverton Moor—70 in.	Millions	38·7
Crenver and Wheal Abraham—Pelly's 80 in.		70·6
Ditto ditto —Willyams's 70 in.		61·6
Do'coath—85 in.		67·3
Great Work—Leed's 60 in.		57·4
West Chiverton—New 80 in.		71·7
West Wheal Seton—Harvey's 85 in.		58·6
Wheal Seton—Tilly's 70 in.		57·1
Ditto —Tregonning's 70 in.		62·9

FOREIGN MINING AND METALLURGY.

The French Iron Trade continues to present the same aspect which it has exhibited for some time past. Prices are maintained without notable change; but if there is no sensible advance to report at present, there is a growing feeling that it will soon take place. Meanwhile coke-made iron is dealt in at 12*l.* per ton in Champagne, and charcoal-made at 13*l.* 4s. per ton; while machine, No. 20, realises 14*l.* 8s. per ton. Charcoal-made pig for refining makes 6*l.* 12s. per ton, while coke-made pig for second fusion realises 7*l.* per ton. Great firmness in prices and much activity in transactions are noted at Paris. Plates, which are very scarce, bring 16*l.* to 16*l.* 8s. per ton, and some contracts are even concluded at 17*l.* 4s. per ton. The imports of iron and plate into France in the first five months of this year are officially returned at 24,000 tons, as compared with 32,000 tons in the corresponding period of 1870.

An advance of 1*l.* per ton is noted in Chilian copper at Paris; but, on the other hand, a fall of 4*l.* per ton has occurred in English. Chilian copper in bars, delivered at Havre, has made 109*l.*; ditto in ingots, 113*l.*; tough English ditto, 109*l.*; and Corocoro minerals, pure standard, 110*l.* per ton. At Havre there has been little doing in copper, and at Marseilles the article has experienced a rather notable fall. Upon the German markets copper has shown some irregularity. A rise of 1*l.* per ton has been noted in Straits and English tin at Paris, but a fall of 1*l.* per ton has occurred in Banca. Banca, delivered at Havre or Paris, has realised 170*l.*; Straits ditto, 165*l.*; and English, delivered at Havre, Paris, or Rouen, 164*l.* per ton. The favourable intelligence received from England and Holland has led to an advance upon the German markets; quotations are not, however, exactly well established. At Rotterdam, Banca fell recently to 95 fls., and Billiton to 93 fls.; upon the receipt of later advices, however, from London quotations rallied to 96 fls. for Banca, and 93½ fls. for Billiton. Disposable Billiton, however, altogether makes default. Some transactions have taken place in Billiton upon English account. An advance of 4s. per ton has occurred in some descriptions of lead at Paris. French lead, delivered at Paris, has made 20*l.* 16s. per ton; Spanish, delivered at Havre, 20*l.* 12s. per ton; and English, 20*l.* 8s. per ton. Belgian and German lead continues to make default at Paris. Upon the German markets lead has been very firm, and in considerable demand. An advance of 4s. per ton has been established in zinc at Paris; Silesian zinc has made 24*l.* per ton at Havre and Paris; other good marks have brought about the same rate.

The coal movement in France is at present almost entirely effected on the railways, which are doing their work to the general satisfaction of all concerned. As there are scarcely any stocks, the quantity of coal carried on the railways cannot exceed the daily production, and as that is rather restricted there cannot be any important quantities of coal undelivered. Apprehensions are entertained that coal will run short during the winter months, and that, as was the case last year, a scarcity will be experienced. The Nord and the Pas de Calais will have to make good on the Channel coast the scantiness of the English supplies. Altogether coal is scarce in France, and coke is still more so. The improvement of the Mediterranean coast is now occupying the attention of French coalowners. After the important works of the St. Louis port and canal, plans have been presented for the improvement of the port of Aigues Mortes, which has for centuries been blocked up with sand. M. Leutherie, engineer of bridges and roads, who has been stationed at Ninies for nearly ten years, and who since he has lived in the district, has made a careful study of the port, denies in a special report upon the subject that the sand-blocked harbour cannot be restored to maritime navigation. On the contrary, he is of opinion that it can once more be made available. In stormy weather, while there is a heavy sea on all along the coast as far as Cette, and even beyond, a comparative calm (M. Leutherie states) prevails in the Gulf of Aigues Mortes. It would then appear desirable that a new port should be formed at this point, as Cette is still represented to be occasionally perilous and difficult of access, notwithstanding the important and remarkable works executed in it.

Business in coal presents much the same aspect in all the Belgian basins. No heavy transactions are reported, but producers maintain their prices, having a sufficiency of orders, and even too many of them. It is rather difficult to ascertain the exact prices at which the small quantities of disposable coal are taken off for consumption. In connection with a strike in the Borinage it should be noted that the miners have resumed work at several points, but there are still too many workings stopped. The report of the Namur Chamber of Commerce states that in that district the production of coal showed an increase in 1871 as compared with 1870 of 11,000 tons; the value also increased last year as compared with 1870 to the extent of 12,320*l.* From 1862 to 1866 the average annual extraction in the Namur district was 287,000 tons; the average selling price was 6s. 10d. per ton; the average wages paid were 2s. per day; and the average extraction effected by each working miner was 141 tons. From 1867 to 1871 the average annual extraction was 339,000 tons; the average selling price was 6s. 7d.; the average wages paid were 2s. 2d. per day; and the average extraction effected by each working miner was 139 tons. In 1871 the extraction was 350,000 tons; the selling price 6s. 9d. per ton; and the average wages paid 2s. 2d. per day. The report contends for unity in railway working, and for serious surveys of a line from Gembloux to the Meuse, as well as of another from Athus, not to Givet, but to a Belgian point on the banks of the Meuse.

The Belgian iron trade is still tending upwards. No. 1 merchant iron has risen to 10*l.* 16s. per ton, and if this price has not yet become general everything leads to the presumption that it soon will. Pig remains comparatively stationary, refining oscillating between 4*l.* 16s. and 5*l.* per ton. The firmness of the market is rendered all the more extraordinary by the fact that the present is the time which is usually the height of the dead season; in the present state of affairs, however, the expression "dead season" has no serious significance, as the advance in prices is maintained, with every probability of a continuance of at least present rates until the winter months. Many persons and companies are giving out orders which had been delayed, so that the summer months, usually so quiet, are characterised this year by a remarkable activity. Last year No. 1 merchant iron was making about 7*l.* per ton, now it is realising 10*l.* 8s. per ton. In 1871 plates were making 9*l.* 12s. per ton, now they are realising 14*l.* per ton. At a recent adjudication of iron forged wheels for railways in Alsace and Lorraine all the leading iron-making countries were represented—England, Belgium, France, and Germany. One of the tenders delivered was from John Brown and Co., (Limited), Sheffield. The lowest tender was delivered by a Belgian firm, but, notwithstanding the difference of price, the Bochum Company obtained the order. The terms of the Bochum tender were about 198⅓ thalers per ton.

MINING IN THE SOUTH AMERICAN STATES.

The following letter relates to the resources of Bolivia—a subject which is attracting increased attention, owing to the confirmation of the silver discoveries in the district of Caracoles, and the project now in course of rapid execution for bringing the country into connection with the commerce of Europe by railway and river communication, *via* Brazil:—

Sir,—In presence of the late depreciation in the market value of all South American stocks, I think it right that the public should know something respecting the resources and means of the South American States to meet their liabilities. I will take, as one instance, Bolivia. Certainly little is known about that country by the majority of the British public. The peculiar geographical position of Bolivia, which country commands a very small portion of the Pacific Coast, has, no doubt, in a great measure diverted the attention of the English public to the adjoining South American States, which possess a greater extent of coast, and are, consequently, in direct communication with Europe.

The population of Bolivia exceeds 2,500,000. The vegetable productions of the country are of the most varied character, including both those of trophical and those of temperate climates: while the minerals to be found are, without contradiction, the richest and most abundant in the world. In the North, not far from La Paz, the most important town, we find copper in an almost pure state, besides other very valuable metals, which are only awaiting the construction of the railway between La Paz and Ariea, *via* Tacna, to be brought into the European markets. All along the west side of the Andes saltpetre is most abundant; and, without dwelling on the world-renowned silver mines of Potosi, the late discoveries of silver ore in the district of Caracoles will make Bolivia a second California.

In less than 12 months two cities, containing more than 15,000 enterprising men, have sprung up where no human being was previously to be found; and who knows where this immigration will end. A railway is to be constructed connecting the mines with the coast, and for this purpose not less than 29 proposals have been made to the Government by highly respectable Chilian and other firms, who not only undertake to build the railway without any guarantee or subvention, but actually offer to the Government a premium in the shape of money, the construction of quays, or otherwise.

Another and most important source of wealth to Bolivia is found in the deposits of guano of Mejillones. No official survey has been made, but from private information, which, as a rule, is more to be relied upon than any official document, what can be seen of the deposits is estimated at more than 30,000,000 tons. The political state of Bolivia is entirely satisfactory. Senor Morales, who is at present at the head of the Government, after having overthrown the rule of the late General Melgarejo, is making every effort to promote the commercial and financial prosperity of the country, and to secure the due administration of the laws and respect for the rights of all classes of the community.—M. Z.

FOREIGN MINES.

St. John del Rey.—The directors have received the following report, dated Morro Velho, July 1:—Gold for second division of June not cleaned up. Water lowered in new shafts during June 7 fms. 3 ft. 9 in. The present rate of lowering is 1 ft. 10 in. per diem.

Don Pedro.—Extract from letter dated June 29: Produce weighed to date, 4210 oits.; estimate for the month, 5810 oits.—Surface Work: Permanent pumping-machinery, wheel pit, and 858 cubic feet of masonry have been built this month. The other work commenced is a changing-house in the adit level, and the new jigging machinery, as designed by Mr. Wendeborn.—From the mining captains, dated June 28: A fair supply of general ores has been raised for the washing strakes boxwork, but little vein in No. 1 stope, and canoa has been holed to the 25. Tattoo north from the stopes, on No. 8 shoot of lode, below the adit level, has given fair strake work throughout, leaving good stoping ground above and below. Stoping operations have been commenced in the bottom of the same, and has afforded a few boxes of vein stuff for the wash-house, but not rich. Samples from Bryant's are still fluctuating, and general body of work poor, but would recommend stoping to be carried on. The shoot pass from No. 1 cross-cut to No. 3 rise is completed, and great advantages are being derived therefrom. The stopes from No. 3 rise are yielding strake work, but not of high standard. The shaft from No. 4 gully is completed, and it well ventilates this part of the mine. Exploratory rise from Bryant's to explore the curve and No. 4 vein that came in contact with the old timber and crushed matter have made a sudden crush; samples from the same proved to be auriferous, and it was thought wise to continue a trial of crushed matter from above. This certainly must have run some distance above Hilcke's level. Yesterday some good strake work came down, samples from same producing both rough and fine gold; this indicates well that the curve or canon, or some of the lines of gold, still exist above Hilcke's level, and every means possible will be used to open on it from some other point with safety, as in the run or crush it is quite out of the question to make any attempt. The vertical rise south from No. 3 has been holed to surface, and carefully sampled, but nothing discovered. The sinking of Vivian's shaft is going on more favourable, and the 2-inch wire-rope with 7-ft. stroke, works well. Vivian's shaft is being reprieved at places from Hilcke's down to landing brace. The horse-whim since the 25th worked by night only. The sinking of No. 1 incline is not so fast as we wish, but we hope that when the rise from No. 8 stopes is communicated to this place that the progress will be more rapid. The reprieving of the adit level is progressing as usual. The general timber work is not so much in advance as we could wish. Nothing more has been discovered in exploratory works. No. 1 stope, in canoa in underlie, is nearly all taken away down to the 25, and but little can be done here until drained. All other stopes present the same features as last reported on.

San Pedro (Copper).—Captain R. M. Kitto, June 1: New shaft is sunk to the 135 fm. level, trip-plat cut, two double skip-roads available, one for drawing water the other for drawing stuff; the shaft, horse-whims, and skip-roads are in good working order. I now propose to cut cistern plat at the 135 fm. level to take up the water, then sink the shaft 40 metres, cross-cut to the manto (or lode) and drain the ground: we shall begin at once to make all necessary preparations for sinking. The cross-cut at the 135 fm. level is driven about 50 metres, through a congenial stratum of ground; the manto was cut about 20 metres from the shaft, where some rich grey ore and yellow sulphurets of copper were met with, since which this level has been driven in a contrary direction from the lode. I have arranged to drive this level on the lode, which will drain the ground as well as discover how large the lode is at this point. The 128 fathom level is extended about 80 metres from shaft. We are sinking a chiflon (a shaft) here to communicate with the 135: this is sinking by two men, and will produce about 2 tons of 35 per cent. ore per fathom. No. 1 stope in the back of 128 fm. level will produce 2 tons of 35 per cent. ore per fathom. No. 2 stope, back of same level, will produce 2½ tons of 30 per cent. ore per fathom. No. 3 stope, back of the same, will produce 3 tons of 25 per cent. ore per fathom. A tribute pitch in the back of the 88 fm. level, by four men, at one-half tribute will produce 2 tons of 25 per cent. ore per fathom. This is all the tribute and tutwork that is being carried on in the mine. The water is about 2000 gallons per day, which is very useful for dressing the ores, &c. I am fully persuaded this mine can be wrought in the way I explained to you before, and with less than one-quarter part of the cost for timber; there are large quantities of reserves standing above the 135 fm. level, which will be available as soon as the ground is properly drained. Time will not admit, at present, to go into this calculation, but I say, without the least hesitation, as soon as the machinery is fixed and the mine put in good working order we shall give very large profits.—Santa Elena: This shaft is sunk about 50 metres below the adit level in a good channel of ground. it is being sunk by three men, and will produce 1 ton of 30 per cent. ore per fathom. I purpose to suspend the sinking here till we bring down a road-way by means of a chiflon, which will ventilate the mine, cut down the present shaft, as it is sunk very irregularly, bring one of the horse-whims from San Pedro, which will enable us to explore this mine effectually.—San Antonio: This mine is sunk about 70 metres from surface by means of chiflon, which will take about 40 metres of shaft to communicate with the works. There is water in this mine, therefore I could not see the bottom. I purpose to sink a new shaft from surface here, draw out the water, and ventilate the mine; this is promising to become a mine of great importance, as the ore is precisely of the same nature as the San Pedro at the same depth.—Cuba: This is a very poor mine; it is sunk about 70 metres below the surface, and is now suspended. There is another chiflon further south, which is sunk about 10 metres from surface, in a manto, which is producing some stains for copper. I think we will continue sinking the chiflon a few metres deeper, in case we do not cut anything kindly. I will search for other lodes, as there are several crossing this sett. I beg to state, I am exceedingly well pleased with the mines, and think in a very short time will be able to make great discoveries.

General Brazilian.—June 28: Mr. T. C. Kitto has been appointed manager of this company, having taken charge on the 17th inst. A great many hands have been dispensed with, although the same amount of work is carried on.—Mine: Although the force has been rather reduced, more works are now being carried on—the sinking of both Moore's and Haymen's shafts, in addition to the driving of both adits. Hitherto all measurements were taken solely by Capt. Roach, notes of which cannot be found in the mine office.—St. Anna—Shallow Adit No. 1: The ground is much the same as last month. Although one-half of the European force has been reduced the works progress favourably, and we hope to be able to drive as much as last month. Mr. Kitto even anticipates more. Haymen's shaft is progressing favourably.—Itabria Shallow Adit: When Mr. Kitto first visited the adit want of air was almost killing the men, it being very difficult to keep a light burning; but with the improvement introduced by the new manager the air is much better now, and no doubt on completion of the said improvements the level will soon be well ventilated. Mr. Dawson left here on the 20th inst. Mr. Kitto accompanied him, and returned on the 26th inst., and is now putting everything into proper order.

Anglo-Brazilian.—Passagem: The supply of stone from Foster's bottom and south-west section, owing to increase of force, has been much larger. The produce per ton of these ores has been fully sustained; estimated produce from Wilde's stamps, 12 heads, about 900 oits. The stone treated at the south side of Victoria the first part of the month has been principally talcose schist, killas, and jacotinga from the Buracco Secco sections, but of low produce. For the last 10 days a better produce may be looked for, as the large raisings from Foster's and Dawson's sections have given a fair supply of second-class ore.—Pitangui: Since the 21st the whim, with the larger water barrels, has been kept working incessantly day and night drawing water from vertical shaft, but we are still 8 ft. from the bottom of the shaft, the rush of water from north-east side not having abated in the least. Hocken's level is still draining the driving of the small eastern exploratory level, assisting very materially. Another attempt will be made in a few days to re-open the main end.—Pitangui: The increase of water has been very considerable, and, though we have been hauling water night and day since the 21st of the month, we have not been able to get to the bottom. I am doing my best to get the loan of some Californian pumps, as those we have are quite out of repair. It is now very evident that even at the best we cannot expect to do much more than the placing of the main pumps in the shaft. The old wheel, which at first we expected would answer for pumping, we find far too weak to resist this unexpected increase of water. Measures have been taken to erect a new one with all speed, the completion of which may be looked for in four months' time. During this time no gold returns of any note can be looked for beyond the stamping of general work taken from the shallow levels in incline. At the same time, I would also call your attention that although so far our experiments on Franco Anto line have been all that could be desired, and moderate returns of gold may yet be derived on further sinking, this section of the mine, in itself, will not be enough, in my opinion, to keep us on the right side of cost for any time, until the permanent works—the new engine and the shallow adit—are completed, and a communication with our present workings. These, as you are already aware, have not been advanced; now it would be advisable with the favourable data before us; in fact, we have no other course left us if the working of the mine is to be continued for any length of time. Nothing has been done to the shallow adit as yet: the new engine-shaft, after a few days of its commencement, on the advice of the managing director, was suspended. The completion of this will take from 20 to 24 months.

Sao Vicente.—June 27: I last had this pleasure on the 16th inst., since when I have not been able to visit the Sao Vicente Mine; but from information received on the 23d inst. everything appears to be going on satisfactorily. We have commenced stamping from the big spar, so often referred to by me of late. I intend stamping 100 tons, just to see what it will give, and at what cost it can be returned. Everything else on this mine is the same as when last reported on.—Bruentu: At the Bruentu Mine, although the expenditure is small, the underground department presents a lively appearance. We are driving at present six levels—deep adit, Bernardo's adit, and Nos. 1, 2, 3, and 4. The surface works are also progressing with regularity.—Deep Adit: The ground in the deep adit is still troublesome, being very soft and wet, but the men handle it very well. I am pleased to say that the whole body of stuff is auriferous.—Bernardo's Adit: In Bernardo's adit we are still making good progress. I expect to drive more in this than in any former month. I cannot possibly do more to push this level than I am doing.—No. 1 Level: In the No. 1 level I am driving on the course of line, which is at present 14 ft. wide; and, judging from a general average of the samples taken, the whole of the stuff is good stamps' work. I like the appearance of this level very much indeed.—No. 2 Level: No. 2 level is very soft, and somewhat troublesome for driving. We have occasionally found a few specks of gold in the batea from samples taken from here. Nos. 3 and 4 levels are without change. Our stamps are working well and doing good duty. I shall soon prove the nature of the stuff, as I intend cleaning some shortly. The carpenters have commenced to put up a small stamps near No. 1 level. This I shall get to work as early as possible. I sincerely hope shortly to have some better news for you, as I am sure you must be anxious to get some returns. I am equally anxious as yourselves, and am using every effort in order to realise a satisfactory result.

Frontino and Bolivia.—The directors have advices under date May 23 and June 12, from Messrs. Restrepo and Sons, the company's bankers at Medellin, accompanied by the usual accounts, and a remittance of gold valued at 1547*l.* 13s. 4d., the produce of the mines for the month ending May 20. The reason of this remittance being less than that of last month is stated in the report of Mr. Barreneche. The following are the accounts for the month ending May 20:—Produce: 603 ozs. of gold dust, from 2400 tons of mineral (average yield per ton 2 dwts. ½ gr.), 1594*l.* 13s. 4d.—Cost: At Frontino and Bolivia Mine, and expenses in London and Medellin, 1194*l.* 2s. 6d.: net profit, 353*l.* 10s. 10d. Mr. Barreneche, superintendent at the Bolivia Mines, says:—In my letter of the end of February I announced to you the discovery of a lode situate before the poor surperficial lode which traversed the ground in this mine. The lode, on which the principal level has already been driven 46 fms., is composed in its whole length of good mineral, which shows itself to be richer in the place where they are actually at work. I have made trials in other parts on the same lode, and its formation is throughout so similar and so uniform in its yield of gold that I am confident it will prove a lasting lode. The lode is at a distance of 900 yards from the mill, and 12 workmen barely suffice to convey the mineral necessary for three stamps, and during the winter, when the six stamps can be used these 12 men would be insufficient. To leave the mine in its present position would not be giving it the importance it merits. The difficulty of transport causes the greatest obstacle to its development. I think, then, that it is urgently needed to proceed with the construction of a tramway. I estimate the expenses at about $2000 (333*l.* 6s. 8d.) By the addition of $300 (50*l.*) each month to the general cost of the mines it would take six or seven months. I should save the company the pay of 12 workmen, costing $288 (48*l.*) per month, beside which the mill would be kept constantly going with a proper supply of mineral."

Rossa Grande.—Extract from letter dated June 28: Every point under operation in the Bahu and Cachoeira Mines is being forced on as fast as the nature of the ground will admit. Samples from the lode are carefully taken daily, and all the ore brought to surface is being piled; but, as you are aware, stoping having for the time ceased, the quantity is small. Every economy consistent with the proper prosecution of the work in hand is exercised, and our prospects continue to look encouraging.—Gongo Soco: On the 17th inst. I arranged a small force to repair an old public road passing through the estate. I have since ordered the same force to make the necessary preparations for diverting the stream and washing the bed of the Gongo river.—Bahu: There is no alteration in the lode in the sump-shaft calling for remark since my last; the ground continues very hard and wet. The lode in the 18 west is a little more contracted than when last reported on, but producing good samples, and I anticipate an improvement in its size again shortly. There is no change to notice in Dinnes's shaft since last advised. The lode in the 10 west is still small, producing very little saving work.—Cachoeira: The water of late in Richards's shaft has increased to such an extent that at present there is great difficulty experienced in sinking same with hand pumps. I shall, therefore, with the least possible delay, put up a small pumping wheel, which is under hand at Gongo. Some wood pumps will be made at once. Everything necessary will be erected and working in about six weeks from this date, and I estimate the total cost of same, independent of old materials I can arrange at Gongo, at about 80*l.* The lode in the bottom of Richards's shaft is 2 tt. wide, producing fair samples. In the 110 east the lode is 3 ft. wide, worth about 10 oits. of gold per ton. In the adit end and No 2 cross-cut there is no change calling for remark since last advised.

Tolima.—The directors have received advices by mail of July 29: Frias: Returns, $9883·3; cost, 7474·7¾; profit, $2408·3¼=401*l.* 8s. 0¼d. The manager reports that during May 26 fms. 3 feet 10 in. of ground was expended, of which 6 fms. 2 feet 2 in. was unproductive, leaving 20 fms. 1 ft. 8 in. productive ground, which produced $9883 3·8, equal to $487·1, or 81*l.* 3s. per fm. of the whole lode stoped. The invoice of the ore raised during May shows produce of extraordinary richness, as out of a total result of 32,250 lbs. (14 tons 7 cwts. 3 qrs. 22 lbs.), 3250 lbs. (1 tons 9 cwts. 0 qrs. 2 lbs.) yielded 1849·91 ozs. of fine silver, or at the rate of 1274·327 ozs. to the ton.—The manager states: The mineral at No. 1 Spanish bottoms continues of good quality. Welton's workings, on the same lode, have now a branch of export ore 4 in. wide. A string of ore has appeared in Pitt's line, and the lode in the adit end now containes a branch of export ore 6 in. wide. The mine has never looked better. Referring to the progress of a new work of great importance at the mine, the sinking of a new shaft, the manager says, "This is progressing well to-day, it has reached 25 feet in depth. Welton's workings have much improved, the branch of export ore is now 8 in. wide. The dropping of the lift at Spanish bottoms, No. 1, goes on slowly, on account of the bottoms being 90 feet in length. The lode going east continues to hold good all down the sink. The branch of export ore in the adit end gets wider as we go in." Referring to the influx of water, which at one time caused some anxiety, the manager is able to remove the apprehension which existed lest it had its origin from a subterranean communication between the Frias river and the works, as he states latterly we have been able to examine the works leading under the river, and we find them sound. The flow of water into Spanish bottoms, No. 1, appear to come almost wholly from old stopes of very great extent. Some water drains from surface from under the dressing-floors and pump-wheel, but this we hope to be able to take up. The underground manager reports that the branch of the eastern level continues, as far as seen, 1 ft. wide, solid rich ore, assaying 456 ozs. fine silver to the ton. The adit end, driving south, has greatly improved, and is yielding rich ore: the mineral branch is 5 in. wide, on a lode 5 ft. wide, galena and pyrites are disseminated through the lode, so we are likely to get into a good bunch shortly.

United Mexican.—Extracts of despatch from Mr. Edward Hay, dated Guanaxuato, June 22, and received July 29: Mines of Jesus Maria-y-Jose and Remedios: The work in these mines has been carried on much on the former scale, but the extraction has been less, because on account of two of the workings being in a dangerous state it has been necessary to secure them by timbering.—New Concern: The cross-cut of San Eduardo has been stopped, as it seems certain now the entire lode has been traversed in that direction. In the end west of the adit a rella (wall of the lode) has been passed, and water oozing through rock traversed by strips of quartz have been met. The strips of quartz dip southwards, and run parallel to the course of the main lode.

Emma.—Telegram, dated Salt Lake, July 26, received in reply to a special enquiry: "Are in full possession of all works: Illinois Company jumped. They, of course, hold their tunnel, which we do not want, and never claimed; it is of no value to us, being entirely barren. Have sufficient claim for heavy damages for trespass on our ground from Illinois Company. They were dispossessed by injunction; this suit, which determined then, will probably have hearing in September, and when gained injunction will be perpetual. Our attorneys have no fear whatever of result. No suit against us. Condition of mine extremely satisfactory."

— Telegram, dated Salt Lake, July 27: "Forwarded 50 tons first-class ore to New York this week. Raised 60 tons of first-class ore this week.—(Signed) Hussey."

— Telegram, dated Salt Lake, July 29: "Forwarded 70 tons since yesterday's telegram: 150 tons of first-class ore at railway depôt: 560 tons first-class ore at mine. Weather fine, favourable for hauling. Will ship 30 tons daily this week; next week more.—(Signed) Hussey."

Birdseye Creek (Gold).—G. L. Powers, July 11: Yesterday we sent you vouchers for June, also remittance of $3750, the result of Uncle Sam and Neece and West. Brown's Hill was not run in June, and shall only run Uncle Sam longer this water season. Next month there will be quite a tunnel expense due on contract, and the shaft and one claim will not make a very large remittance. I hope to get instructions to place the amount in bank here to meet the expenses of the tunnel, shaft, &c. The tunnel is working very well; we are driving with three shifts of two men each, which is about all that can be done from one face. The rock is not getting any harder, and I hope and believe from the rock in the shaft it will not. Hoping to hear from you soon.

Sweetland Creek (Gold).—G. D. McLean, July 2: The run we are now making will not end before the last of this month; this run will pretty nearly exhaust all of our grade. Whatever profits I make on the run I shall retain here, with your permission, in order to provide against the possible necessity of transmitting a portion of the working capital here, as I have before suggested. The new tunnel is progressing well, the seam continuing most excellent, and swinging just to the point desired. We are now in something over 1100 feet, and consider that we are half done. The shaft is down 45 ft., and lowering as fast as can be, considering the character of the rock. We want to complete the tunnel to the shaft before the rains commence next winter, if possible; that done, we are out of all danger from water getting the mastery of us in the shaft. I wish we had 10 feet grade remaining to the old tunnel, then we could send you profits, and carry all expenses; as it is, I shall be perfectly satisfied if I can defray expenses until the new tunnel is completed. If the company will be just as patient under a little adversity as they have been contented with constant dividends it certainly will be most gratifying, as well as encouraging to me; and, furthermore, I will promise to come out all right in the end.

Utah (Silver).—The directors have received a telegram from their superintendent, dated July 30, as follows:—"Furnace running well, producing 7 tons daily."

Malpaso Gold Washing.—Mr. C. R. Clarke, June 16: I hoped to send word by this mail that all was done and the mine was running, but unavoidable circumstances have detained us, so that I shall have to wait until next mail for that pleasure. When I wrote you last I had 40 peons, 6 carpenters, and 12 sawyers at work, besides the men in the blacksmiths' shop, blockmakers, and charcoal-burners; everything was moving along quite lively, and I expected to complete my work in short order; but there came on a spell of wet, stormy weather, then a feast-day, and after it was over my men were scattered, and for awhile I only had 13 peons, and I have not averaged over 20 since. On the 24th of this month comes a "big feast-day;" the men will leave on the 22d, and I shall have no work done after that until July, all of which is very annoying. I am getting along with the work as well as can be expected under the circumstances. I have carpenters' work on ditch all complete, and shall have my sluice so near completed before feast day that I can turn the water through it, to protect it from the sun. I have used 24,000 mining feet of lumber in flumes and sluice, all of which was cut by hand, then carried in, one plank at a time, from the forest, none of it coming less than half a mile, and a great deal of it being carried over a mile, and all of it then had to be worked over and straightened by the carpenters before it could be used; so you can see our carpenters' work necessarily moved slow. I shall have 600 feet of sluice to start with; dimensions 3 ft. wide and 2 ft. deep, lined and battened. I had to build it over very rough, uneven ground, some portions of it being on the ground, and other portions on trestle, some of it over 15 feet high. It has been a long, tedious job, but after we get it started (if I have no trouble with ditch) we shall soon make up for lost time. I have done a great deal to guard against breaks or trouble on ditch, all of which I explained in my last letter; and when I begin to run a large quantity of water through it, I shall keep men to watch it all the time, so as to prevent any serious mishap. After I make a run, and know what we can do, I shall tell you what I think about further improvements, and how I think it best to open the ground more extensively. My foreman, Mr. John Williams, from California, has arrived with his family, all right. I think he is an A 1 practical hydraulic miner, and he will be a great assistance to me. Mr. Williams is very favourably impressed with the diggings, and thinks we will "astonish the natives" when we get started.

Rica Gold Washing.—The general agent writes (June 19) that Mr. Clarke and himself had resoled to bring the whole staff of men employed at the Malpaso Mine in opening the ditch, &c., over to the Rica Mine, and by this means they anticipated the work would be carried out with great speed, the Malpaso men being now used to the work.

[For remainder of Foreign Mines see to-day's Journal.]

London General Omnibus Company.—Traffic returns for the week ending July 28, 11,379*l.* 7s. 4d.

McKEAN AND CO.,

ENGINEERS,

42, BOROUGH ROAD, S.E., LONDON,

AND 5, RUE SCRIBE, PARIS.

ROCK DRILLS AND GENERAL MINING MACHINERY

MANUFACTURED BY

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CONSULTING ENGINEER, AGENT, AND VALUER OF PLANT AND MACHINERY.

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BOURNE STREET AND CASTLE STREET, DUDLEY.

ESTABLISHED 1848.

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ENGINEERS, SHIPBUILDERS, AND CONTRACTORS,

BLOWING ENGINES, WINDING ENGINES,

Bourne's Patent Spherical Governors, Bourne's Patent Feedwater Heaters, Bourne's Patent Gas Furnaces, Bourne's Patent Coal-dust Furnaces,

PUMPING ENGINES, STEAM BOILERS,

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AUCTIONEERS AND VALUERS

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COLLIERY PLANT, IRONWORKS, &c.

Estimates for Periodical Surplus Sales, Annual Valuations, &c.

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MANCHESTER,

SOLE AGENTS FOR { "S. B. HÆMATITE," "S. B. YORKSHIRE," "CLAY LANE," } PIG IRON

AGENTS FOR JACKSON, GILL, AND CO., IMPERIAL IRONWORKS, NEAR MIDDLESBOROUGH; DARLINGTON WAGON COMPANY, DARLINGTON.

SCOTCH, HÆMATITE, STAFFORDSHIRE, DERBYSHIRE, FOREST OF DEAN, COLD BLAST AND REFINED PIG IRON, PUDDLED BARS AND BAR IRON, STEEL, SPELTER, TIN, COPPER, LEAD, SHEETS, ORES, &c.

HANDASYDE'S BOILER COMPOSITION

(C. H. HANDASYDE AND CO., DALKEITH, N.B.)

For the REMOVAL and PREVENTION of INCRUSTATIONS in STEAM BOILERS, is in extensive use among Collieries, Ironworks, and Mills in Scotland; also, with great success, on the North British Railway Company's Locomotives.

Net price, 15s. per cwt., carriage paid; 10 per cent. off 1 ton orders; free from acids.

A TRIAL SOLICITED.

SPECIALLY RECOMMENDED for LOCOMOTIVES, being completely soluble in water, and only requires to be put into the tender.

INCREASED VALUE OF WATER POWER

The extraordinary advance in the price of coals has directed more attention to water power, and to the best manner of applying it. For many years it has been, to a great extent, neglected and undervalued. One great objection to it has been the variable nature of most streams in these countries, having abundance of water during the winter half-year, and very little in the dry season. No kind of wheel hitherto known was able to give the proper proportion of power from the smaller quantities of water, so that it became the practice very generally to use steam entirely during the summer half of the year, letting the water go to waste. This is now completely prevented, and the full available power can be obtained from a stream at every season by using

MacADAM'S VARIABLE TURBINE.

This wheel (which is now largely in use in England, Scotland, and Ireland) is the only one yet invented which gives proportionate power from both large and small quantities of water. It can be made for using a large winter supply, and yet work with equal efficiency through all variations of quantity down to a fifth, or even less if required. It is easily coupled to a steam-engine, and, in this way, always assists it by whatever amount of power the water is capable of giving, and, therefore, saves so much fuel.

This turbine is applicable to all heights of fall. It works immersed in the tail-water, so that no part of the fall is lost, and the motion of the wheel is not affected by floods or back-water.

References to places where it is at work will be given on application to the makers.

MacADAM BROTHERS & CO.,

ENGINEERS, BELFAST.

THE BURLEIGH ROCK DRILL.

THE BEST AND ONLY PRACTICAL DRILL.

IT DOES NOT GET OUT OF ORDER.

SPECIALLY ADAPTED FOR

SINKING AND MINING PURPOSES.

PROGRESSES through Aberdeen granite at the incredible rate of 10″ per minute.

SAVES £5 a day as compared with hand labour, independent of the enormous saving effected in the general expenses, such as PUMPING, VENTILATION, INTEREST OF CAPITAL, &c., from the fact of the "put-out" being increased four-fold.

DRILL POINTS.—The saving in steel alone is considerable. One drill will go through 20 feet of Aberdeen granite without sharpening.

...ders received and executed solely by—

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DEATH OR INJURY FROM ACCIDENT,

WITH THE CONSEQUENT

LOSS OF TIME AND MONEY,

PROVIDED FOR BY A POLICY OF THE

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AGAINST ACCIDENTS OF ALL KINDS.

...n annual payment of £3 to £8 5s. insures £1000 at death, or an allowance a ...tthe rate of £6 per week for injury.

£650,000 have been paid as compensation—

One out of every twelve Annual Policy Holders becoming a claimant each year.

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WILLIAM J. VIAN, Secretary.

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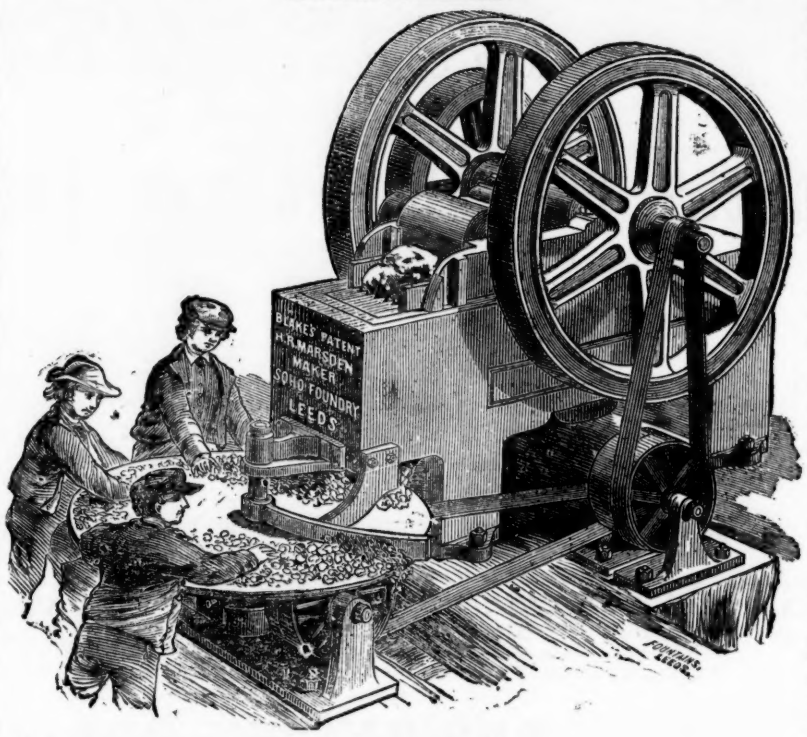
BLAKE'S PATENT STONE BREAKER,

OR ORE-CRUSHING MACHINE,

FOR REDUCING TO SMALL FRAGMENTS ROCKS, ORES, AND MINERALS OF EVERY KIND.

This is the only machine that has proved a success. This machine was shown in full operation at the Royal Agricultural Society's Show at Manchester, and at the Highland Agricultural Society's Show at Edinburgh, where it broke 1½ ton of the hardest trap or whinstone in eight minutes, and was AWARDED TWO FIRST-CLASS SILVER MEDALS. It has also just received a SPECIAL GOLD MEDAL at Santiago, Chili.

It is rapidly making its way to all parts of the globe, being now in profitable use in California, Washoe, Lake Superior, Australia, Cuba, Chili, Brazil, and throughout the United States and England. Read extracts of testimonials:—



For illustrated catalogue, circulars, and testimonials, apply to—

The Parys Mines Company, Parys Mines, near Bangor, June 6.—We have had one of your stone breakers in use during the last 12 months, and Capt. Morcom reports most favourably as to its capabilities of crushing the materials to the required size, and its great economy in doing away with manual labour.

For the Parys Mining Company,
H. R. Marsden, Esq. JAMES WILLIAMS.

The Van Mining Company (Limited), Van Mines, Llanidloes, Feb. 6, 1871.—Our machine, a 10 by 7, is now breaking 180 tons of stone for the crusher every 24 hours. I may say, of all our machinery, that for simplicity of construction and dispatch in their work, they are equal to anything in the kingdom, but your stone breaker surpasses them all. W. WILLIAMS.
H. R. Marsden, Esq., Leeds.

Chacewater, Cornwall, Jan. 27, 1869.—I have great pleasure in stating that the patent stone breaker I bought of you some three years ago for mines in Chili, continues to do its work well, and gives great satisfaction. It crushes the hardest copper ore stone—put it through ¼ inch size by horse power—with great ease. I can safely recommend it to all in want of a crusher; can be driven by steam, water, or horse power.
H. R. Marsden, Esq. JAMES PHILLIPS.

Terras Tin Mining Co. (Limited), near Grampound Road, Cornwall, Jan. 1871.—Blake's patent stone crusher, supplied by you to this company, is a fascination—the wonder and admiration of the neighbourhood. Its simplicity is also surprising. Persons visiting it when not at work have been heard to remark, "This can't be all of the machine." It will crush to a small size from 8 to 10 tons of very hard and tough elvan rock per hour; taking into its leviathan jaws pieces of the hardest rock, weighing 200 lbs. or more, masticating the same into small bits with as much apparent ease and pleasure as does a horse his mouthful of oats. On every 100 tons of the rock crushed by the machine there is a direct saving to the company of not less than £5 over the process of hand labour previously adopted by them, and the indirect saving much more, the machine being ever ready to perform the duties required of it. It breaks the stuff much smaller, and in form so fitted for the stamps, that they will pulverise one-third more in a given time than when performed by hand labour.

JOS. GILBERT MARTIEN.
H. R. Marsden, Esq., Leeds.

Welsh Gold Mining Company, Dolgelly.—The stone breaker does its work admirably, crushing the hardest stones and quarts. WM. DANIEL.

Ovoca, Ireland.—My crusher does its work most satisfactorily. It will break 10 tons of the hardest copper ore stone per hour.

WM. G. ROBERTS.

General Frémont's Mines, California.—The 15 by 7 in. machine effects a saving of the labour of about 30 men, or $75 per day. The high estimation in which we hold your invention is shown by the fact that Mr. Park has just ordered a third machine for this estate. SILAS WILLIAMS.

Your stone breaker gives us great satisfaction. We have broken 101 tons of Spanish pyrites with it in seven hours. EDWARD AARON.
H. R. Marsden, Esq. Weston, near Runcorn.

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ONLY MAKER IN THE UNITED KINGDOM.

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SAFETY; NO RISK from DANGEROUS EXPLOSION; HIGH-PRESSURE STEAM, with ECONOMY OF FUEL; perfect circulation, and ready means of removing sediment.

Saving of cost and time in repairs; portability, and, for export, great saving in freight.

Patentees and Manufacturers: J. and F. HOWARD, Britannia Iron Works, Bedford.

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STATIONARY ENGINES,
From 1 to 30-horse power. No building required.

STEAM CRANES,
1½ to 30 tons. For wharf or railway.

HOISTING ENGINES.
10 cwts. to 15 tons. With or without jib.

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6 to 27-horse power. Light and heavy.

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STATIONARY ENGINE.

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6 to 27-horse power. For steep inclines and curves.

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Hoisting, cooking, and distilling. Passed for half-water.

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For light screw and paddle steamers, ships, boats, &c.

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With or without boilers and connections.

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The ORIGINAL Combined Vertical ENGINES and BOILERS introduced by Mr. CHAPLIN, in 1855.

EACH CLASS KEPT IN STOCK FOR SALE OR HIRE.

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AS SUPPLIED TO H.M. DOCKYARDS AND FLEET.

THIS OIL is suitable to every kind of Machinery. As a lubricant it is equal to the best Sperm or Lard Oil, while it possesses the great advantage of being entirely free from any principle which will corrode the metal bearings.

For particular kinds of Machinery, the Oil may be specially prepared of a consistency and character adapted to the nature of the work to be done.

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"I herewith certify that the Rangoon Engine Oil, manufactured by Messrs. Chas. Price and Co., is free from any material which can produce corrosion of the metal work of machinery. It is indeed calculated to protect metallic surfaces from oxidation.

"The lubricating power of this oil is equal to Sperm or Lard Oil.

"T. W. KEATES, F.C.S., &c. &c."

Every parcel of the Oil sent from the work bears the Trade Mark of the Firm.

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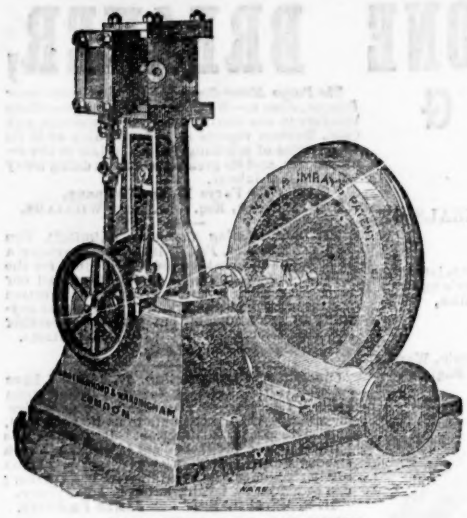

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IMPROVED GAS EXHAUSTERS.
SCREW-PILE DRIVING MACHINES.
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Pumping Machinery of all kinds.

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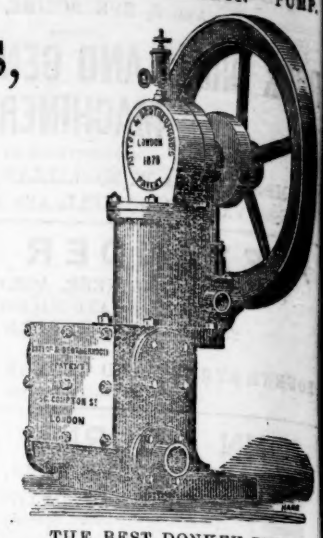

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STATIONARY ENGINE, From 1 to 30 horse power. No building required.
PORTABLE HOIST, 1 to 30-horse power. With or without jib.
STEAM CRANE,* 30 cwts. to 20 tons. For wharf or rail.
CONTRACTORS' LOCOMOTIVE, 6 to 27-horse power. For steep inclines and quick curves.
TRACTION ENGINES, 6 to 27-horse power. Light and heavy
SHIP'S ENGINE, Winding, Cooking, and Distilling. Passed by Government for half water.

* These cranes were selected by H.M. Commissioners to receive and send away the heavy machinery in the International Exhibition.

From the STRENGTH, SIMPLICITY, and COMPACTNESS of these ENGINES they are extensively USED for GENERAL PURPOSES, and also in situations where STEAM-ENGINES OF THE ORDINARY CONSTRUCTION CANNOT BE APPLIED.

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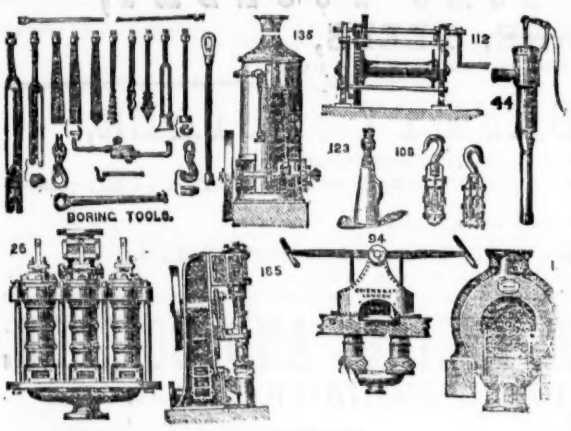

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SOLE MAKERS,

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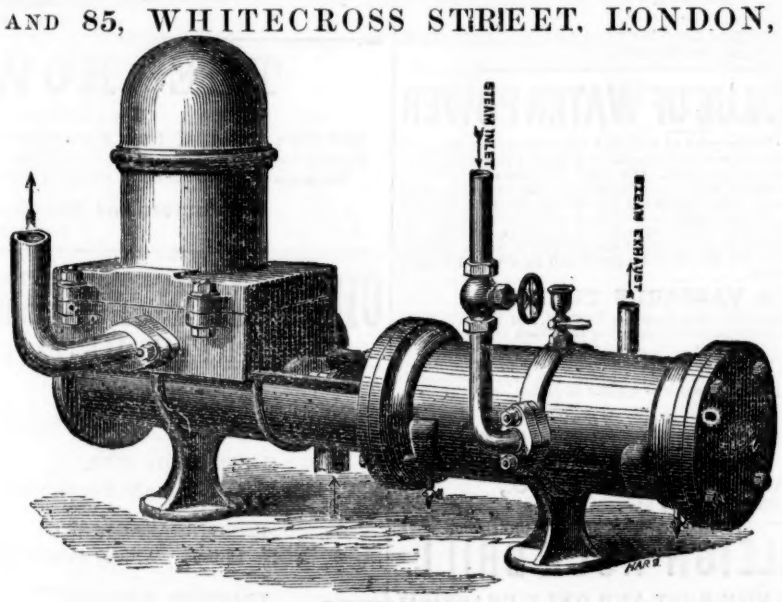
84 AND 85, WHITECROSS STREET, LONDON, E.C.



TESTIMONIALS.

Tottenham Local Board of Health, Tottenham, 12th December, 1870.

GENTLEMEN,—I have much pleasure in informing you that your Steam Pump proved itself to be one of the most useful machines for raising water that I have ever seen. It was driven night and day for nearly three months without a single hitch. The construction of the pump is so simple that any person can be taught to open it, and replace or clear the valves. I have seen no engine at all to be compared with it for mines, coal pits, or small water-works.

I am, Gentleman, faithfully yours, (Signed) P. P. MARSHALL, C.E., Surveyor.

Messrs. HAYWARD TYLER and Co., London.

Aston Main Coal Company, near Sheffield, 1st December, 1871.

To Messrs. HAYWARD TYLER and Co., 84, Upper Whitecross-street, London.

GENTLEMEN,—In answer to your enquiry, I beg to state that the two "Universal" Pumps supplied to us (through your agent, Mr. T. A. Ashton) are doing our work exceedingly well; we think they are the best in the market, and shall be glad if you will send us another 9-in. cylinder 6-in. pump, one week from this date.

Yours truly, (Signed) ASTON MAIN COAL COMPANY.

Extract of a Letter from JOHN SIMPSON, Esq., to Hayward Tyler and Co.'s Agent.

Rhos Llantwitt Colliery, Caerphilly, near Cardiff, March 4, 1872.

I should like to have the water-piston and clacks the same as in our present pump, as they work exceedingly well, and I do not think it is possible to improve upon the present pump, except by lining the cylinder with brass es ordered. (Signed) JOHN SIMPSON.

J. WOOD ASTON AND CO., STOURBRIDGE

(LATE WOOD BROTHERS),

(WORKS AND OFFICES ADJOINING CRADLEY STATION),

Manufacturers of

CRANE, INCLINE, AND PIT CHAINS,

Also CHAIN CABLES, ANCHORS, and RIGGING CHAINS, IRON and STEEL SHOVELS, SPADES and FORKS, ANVILS, VICES, SCYTHES, HAY and CHAFF KNIVES, PICKS, HAMMERS, NAILS, RAILWAY and MINING TOOLS, FRYING PANS, BOWLS, LADLES, &c., &c.

Crab Winches, Pulley and Snatch Blocks, Screw and Lifting Jacks, Ship Knees, Forgings, and Use Iron of all descriptions.

STOURBRIDGE FIRE BRICKS AND CLAY.

Printed by RICHARD MIDDLETON, and published by HENRY ENGLISH (the proprietors), at their office, 26, FLEET STREET, E.C., where all communications are requested to be addressed.—*August 3, 1872.*